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“Usually when people hear the word *dyslexia* they think only of the reading, writing, spelling and maths problems a child is having at school. Some associate it only with word and letter reversals, some only with slow learners. Almost everyone considers it some form of learning disability, but the learning disability is only one face of dyslexia”.

(Ronald D. Davis, 4)

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Introduction

Dyslexia is known to most as a deficiency in reading and spelling that in most cases is discovered at the age when children begin learning to read and write, or even at a much later age. However, a definite cause for this deficiency has not yet been discovered and some even see dyslexia to be a gift, since many of these children have above-average talent in subjects other than those where reading and/or spelling is/are required i.e. music or art. The first two chapters of this thesis will through different hypotheses aim at finding a meaning and possible causes of dyslexia, moving from a more general outline of social and genetic implications to a more detailed effort at explaining the social and psychological relationship or 'interpellation' between the dyslexic and his/her surroundings with a look at epidemiological studies as a build up to approaches in dyslexia and EFL teaching. The second part i.e. the last two chapters will try to narrow in on the psychosocial problems and challenges for pupils and teachers in the EFL classroom, especially the successful mastering of EFL from the pupil's point of view and successful teaching methods, strategies and concepts from the teacher's. An attempt will be made to present various theories and ideas concerning approaches to EFL teaching with special reference to the problematic of dyslexia, reading motivation and identifying dyslexia in the EFL classroom. Following this an attempt will be made at presenting methods in teaching and aiding dyslexics in the EFL classroom with emphasis on learning styles, meta-cognition, meta-linguistics and mnemonic devices. The thesis ends by broadening out to the latest concepts of EFL teaching and dyslexia namely to ITC-based concepts for successful learning in and out of the classroom. This includes methods such as internet, intranet and other forms of technology that open up more opportunities for teachers and dyslexic learners concerning EFL teaching and learning in the future.

Chapter 1 What is dyslexia?

The word 'dyslexia' comes from Ancient Greek and derives from two words namely 'dys' meaning 'difficulty with' and 'lexicos' or 'lexis' meaning 'words', thus difficulty with words, and has come to describe children and adults who have difficulty in reading and writing. (Schneider/Crombie 2003, ix) This in its simplest definition is too vague to sum up all the problems and aspects behind the word, especially the problematic of the negative connotation. Thus the arguments go much further as I will discuss.

1.1 Defining dyslexia

It is not easy to define Dyslexia because different factors are responsible for the different deficits that concern the individual developments of dyslexic children¹. This does not only concern the individual deficits of the children themselves but also outer factors that affect their daily lives i.e. from a social and cultural point of view. Nevertheless, from a normative point of view, a certain amount of orientation is needed to define the deficits especially for research purposes, integration of dyslexics, and as a boundary marker when starting research on the topic. Here are three very interesting definitions:

Davis points out:

Apparently , some people are born with a genetic code that enables them to utilise the part of their brain that alters and creates perceptions. Being born with this genetic code doesn't give them dyslexia, it only makes it possible for them to develop it.
(Davis 2007, 73)

This leans on the theory that Dyslexia is genetically handed down the family line, which Davis sees as something positive, a talent that can be developed and used. Thus, Dyslexia according to him is not created in the classroom, but

¹ The word „children“ is used throughout my thesis instead of dyslexics or dyslexic people to emphasise the fact that the topic is about dyslexics learning English as a foreign language at school, where it is not clearly stated.

is a natural hereditary aspect of certain human beings and develops naturally, since it is created naturally. Having dyslexics in the classroom is thus a natural thing. The classroom should thus adapt to dyslexics and not only dyslexics to the classroom. Peer/Reid emphasise this with their definition in part:

Dyslexia is a label, but one that can carry significant weight in terms of resources, examination support, teaching approaches, assessment needs, curriculum differentiation and management, and parental involvement. (Peer/Reid 2003, 9)

The idea of it being a label, shows that on the one hand Dyslexia is not treated as something natural, that is does not 'blend in' with 'normal' classroom procedures. On the other hand, the idea of it being a label helps to motivate confrontation with the educational establishments, parents, teachers and the situation of the children themselves. Here as opposed to Davis, the social problems such as integration are used in defining dyslexia rather than the genetic argument, which is from my point of view more important for positive classroom integration. The genetic approach is interesting and in itself idealistically driven, but does not help to solve the problems dyslexics have in real everyday life, these problems being with reading, spelling, writing, memory, coordination, as well as organisational difficulties, information processing, phonological and visual difficulties, clumsiness, and/or certain discrepancies e.g. considerable problems in some subjects such as English Literature on the one hand, and considerable above-average skills in other subjects such as Music or Painting. (Peer/Reid 2003, 9-13)

These two definitions take dyslexia either as being genetically 'bestowed' or as taking its problematic with external educational norms. Stowe however points out that despite the many definitions,

A serious and complete definition was adopted by the Orton Dyslexia society renamed The International Dyslexia Association, an organization devoted to helping people with dyslexia, in 1994. This organization states:

“Dyslexia is a neurologically based, often familial disorder which interferes with the acquisition and processing of language.

Varying in degrees of severity, it is manifested by difficulties in receptive and expressive language – including phonological processing – in reading, writing, spelling, handwriting, and sometimes in arithmetic. Dyslexia is not a result of lack of motivation, sensory impairment, inadequate instructional or environmental opportunities, or other limiting conditions, but may occur together with these conditions. Although dyslexia is lifelong, individuals with dyslexia frequently respond successfully to timely and appropriate intervention.” (Stowe 2000, 1p.)

In this definition not only the negative sides are brought forward but also the positive ones. Dyslexia is not only something static that remains through hereditary deficits of the brain which cause problems with reading, writing, spelling, handwriting, and maths, but it is a synchronic state, individual, that can be improved diachronically with help from the environment. This practical-directed definition thus addresses teachers, educational institutions and dyslexics themselves who can use this kind of definition to help understand themselves in so far that the deficits are not only to blame for dyslexia but also the way the environmental conditions surrounding dyslexics and dyslexia go about implementing learning strategies and intervening.

What I am missing in this definition is the fact that dyslexics may have deficiencies in the above listed skills, but they have as Davis² points out over-average skills and talents in other matters. They can use their brain’s ability to change and create perceptions which is the primary ability. They are highly aware of their surroundings, which makes them more curious than average people. They think predominantly in pictures rather than words which would mean they have an above-average competence in creativity and thus in subjects such as Art and Music. Dyslexics are also highly intuitive and perceptive, and they think and perceive using all senses. They can experience thought as reality and they have vivid imaginations. But these abilities can only be developed into above-average intelligence and great creativity if they are not suppressed or stopped by parents and/or the educational system. (Davis 2007, 5) This makes sense because many famous names were/are dyslexics such as inventors, scientists, or engineers such as Albert Einstein, Thomas Edison, or Alexander Graham Bell, artists and writers such as Leonardo da Vinci, Walt

² Davis is himself a dyslexic.

Disney, Hans Christian Andersen or W.B. Yeats, politicians such as Winston Churchill, performers like Cher and Whoopi Goldberg, and athletes such as Jackie Stewart or Duncan Goodhew just to mention a few. (Davis 2007, 4)

To sum up on the topic of definitions, one can say that dyslexia should not only be defined through the deficits it entails, but also through its uniqueness in bringing persons with special talents into the educational system, who, if taught well and integrated correctly, can be moulded into great personalities and into the gift of mastery in different fields of knowledge and work. Negative starts can be changed into positive ends. Of course there is no clear-cut definition as already mentioned, too individualistic being the problems, talents and needs of each dyslexic. This in a social and educational sense should motivate the persons in power and those close to these children to do more for dyslexics, be it in law makers at parliamentary level or through the average teacher.

1.2 Dyslexia, genetics and IQ.

Genetically, the brain seems to decide to a great extent whether someone is born a dyslexic or not, where reading and writing deficits related to dyslexia are discovered at school if at all, but it is very doubtful that there is a specific gene that causes dyslexia, which I will account for further on. However, it is dangerous to assume that only genetics causes dyslexia. In earlier societies people from higher social groups were said to have better genes than those from lower ones. The German Nazi Regime of World War Two committed genocide because they thought that some races were genetically superior than others, that their abilities were much greater than that of others, which is absurd from the point of view of true scientific exploration, argumentation and evaluation and for truth and honour's sakes.

It is questionable whether dyslexia is solely hereditary because as we know writing was invented only 4000 years ago, which would mean all humans living today would have a hereditary line of dyslexia. More plausible is Fawcett/Nicolsons' statement:

...dyslexia has an established genetic base - a male child with dyslexic parent or sibling has a 50% chance of being dyslexic. There should be therefore some underlying abnormality of the brain reflecting this genetic inheritance. (Fawcett/Nicolson 2005, 28)

'Some' underlying abnormality is a more realistic approach to the problem, but a rather negative one in describing dyslexia as an abnormality if abnormality is bestowed with a negative connotation. If the genetics of dyslexia is to be seen from a positive point of view it would be important to state that it is a "...respectable neurological diagnosis, and not another word for laziness, or stupidity...", and for the dyslexic, it "...can transform his self-image." (Stein 2005, 77) Thus the problem of dyslexia should be seen from a more positive perspective, moving from abnormality, laziness and stupidity to a more neutral neurological diagnosis. How much more positive can we get on the matter of genetics, since the probability of changing something hereditary is indeed extremely difficult. One can only move further in discussing other matters for the cause of dyslexia, such as environmental i.e. social and political ones.

So what we can say is that the genetic 'fault' is thus neurologically based taking into account the development of the nervous system and how it contributes to reading and writing deficiencies. The question of heredity itself is obsolete since it does not contribute in any way in understanding or contributing in solving the deficits that dyslexics lack in the classroom and social environment. Of more significance are the neural processes that are responsible for the ability of human beings to read. Stein states that:

The great advantage of studying cognitive reading skills from this point of view³ is that they are much easier to measure precisely than many other higher functions, such as emotion, motivation or delusional thinking. (Stein 2005, 77)

This means looking deeper into the neurological functions of the body and especially into what human beings are made up of, namely DNA. The body's cells contain a nucleus made up of twenty-three pairs of chromosomes, XX or

³ Meaning genetic.

XY depending on sex. These are wound around proteins called histones. DNA is made up of pairs called base pairs. From these it is known that "...5% from the 30000 different genes that are known to exist, so there are ca. 10000 base pairs per gene. The rest is known as junk DNA". (Stein 2005, 77). Thus most of the genetic information in DNA is not known. What is for sure is that genes control the synthesis of proteins, and the proteins are relevant for the development of the brain. Neuropathological abnormalities were found in post-mortem tests made on dyslexics as Stein points out, which indicate that these occur before birth when the foetus is about 24 weeks old, when the cerebral cortex develops and folds most quickly. These abnormalities are referred to as cortical ectopias which are found predominantly on the left side of the brain, that is on the language side:

These brain 'warts' are about 1mm in size and they form because disobedient developing neurones migrate past the outer limiting membrane to form an abnormal growth on the surface of the cortex. (Stein 2005, 78)

The reason for this is not known. Furthermore, one assumes these ectopias are found in all humans, varying in quantity, but in dyslexics more than average are found in the brain especially on the left, language side as already mentioned. However, the genes express themselves through signs and systems, the way it is done is called the phenotype⁴. Phenotypes are a result of an organism's genes as well as the influence of environmental factors and potential connections between the two. This would take us from the idea of a genetic reason for dyslexia to a possible genetic pattern movement that is not only apparent in dyslexics but are brought into action through the development of the child in his/her environment, an important factor for developmental dyslexia. To affirm this reason for dyslexia would depend on whether the child's single word reading development is significantly lower in comparison to other children of the same age. (Stein 2005, 79p)

⁴ See <http://en.wikipedia.org/wiki/Phenotype>

Olson, Dutta, Gayan and DeFries have focussed on the deficits in printed word recognition, which is the main deficit in children with disability in reading. They looked at the results of behavioural-genetic analyses on group deficits, genetic influences on orthographic and phonological skills in word recognition, the difference in genetic etiology⁵ among disabled readers related to IQ, general processing speed and “phonological-surface” subtype dimensions, and last the results of DNA linkage analyses that show that chromosome 6 may be involved in the etiology of many reading disabilities. (Olson et al. 1999, 133)

To see if dyslexia is genetically influenced, using behavioural-genetic analyses, twins from different schools were taken into a study at the University of Colorado. Excluded were children with IQs of less than eighty-five and those with seizures. From these twins the monozygotic⁶ twins were separated from the dizygotic⁷ twins to see if genetically similar twins had more similarities in reading and spelling than twins with less similar genes. Taken into account were also the shared-environment factors, whether each pair of twins grew up and were living under the same conditions. Thus within-pair differences were excluded from the study. Reading and languages skills were compared between each pair of monozygotic and dizygotic twins respectively. The results were different for the different measures i.e. reading comprehension results were different from word recognition results of the children whether monozygotic or dizygotic. This meant that the genetic factor did not prevail over the skills of the children, since the results in reading and language skills were inconsistent in all the tested children. Thus the...

...less than perfect phenotypic correlations among different reading and related cognitive skills allows the possibility of significantly different estimates of genetic ... and shared environment...influences on the group deficit across different measures.(Olson et al. 1999, 136)

What however Olson et al. hypothesized after this experiment was that reason for dyslexia should be taken further than just genetically. The ability for

⁵ Etiology is the study of causation as stated in <http://en.wikipedia.org/wiki/Etiology>

⁶ Monozygotic twins are those that share the same genes

⁷ Dizygotic twins are those that share half of their segregating genes on average

dyslexics to deal with reading more advanced texts, higher levels of vocabulary and more complicated comprehension questions would have to depend on the educational standards and home environment of the twins and not on their genetic 'constitution'. On the other hand one could argue that every child has a basic phonological process or word recognition 'machine' that is genetically 'given' at birth, since all human beings by birth have the potential to read and write. Thus, genetics according to Olson cannot be the only reason for all deficits dyslexics have, but a certain hindrance seems to be genetically caused if the 'machine' is less powerful in some than in others.

Orthographic and phonological skills are heritable, since all human beings possess this 'talent' but it does not mean that their individual genetic construct is the same as anyone else's. One must not forget environmental factors (Olson 1999, 137). Olson raises the question if there are significant independent genetic effects of independent phenotypic variance across different reading-related variables. This comes down to independent variance in orthographic and phonological skills. Tests were carried out where results concluded that orthographic and phonological deficit scores were independent from each other, both vice versa and both considerably heritable. (Olson 1999, 138)

Another factor for the genetic reason for dyslexia is IQ. Scientists have looked into the difference in genetic etiology among disabled readers related to IQ, and state that "...discrepancy between reading level and IQ is essential to the classification of dyslexia or specific reading disability" (Olson 1999, 140). Olson furthermore points out that this argument has been rejected by some, arguing that phonological deficits are similar in disabled readers despite different IQ scores for each pupil.

Still the answer as to whether dyslexia is caused solely through the biological basis of the human being or best phenotype characteristics cannot be fully answered as yet until more studies have been carried out. Fact is however that:

Such understanding should also provide us with explanation of why reading problems are so often associated with other neurodevelopmental anomalies. 50% of dyslexics

have symptoms of specific language impairment, developmental in- co-ordination (dyspraxia) and attention deficit hyperactivity disorder. (Stein 2005, 80)

Moreover other factors such as immune system deficiencies seem to crop up more than average in dyslexics as Stein points out. These are for example allergies, eczema and hay fever. Stein also moves on to say that there is a connection between the immunological processes and the nervous system. He uses the argument that the deficiency of omega three essential fatty acids causes problems with certain functions of the nervous system, among them also those resulting in dyslexia.

If this hypothesis is to be made credible, then the question should be asked which of the forty-six different chromosomes with three billion DNA base pairs or so are responsible for reading and writing disabilities and which phenotype is the dyslexic one. This seems to be possible, since dyslexia is so common and "...reading ability and its component skills can now be measured so precisely and correlated with modern DNA assays". Indeed, two different studies carried out by Stevenson⁸ in Southern England and DeFries⁹ in Colorado have pointed out that roughly 50% of reading disabilities are caused by genes, and the other 50% from upbringing and environment. It is unlikely that a single gene is responsible for dyslexia. A guess is that probably five to ten genes are responsible. (Stein 2005, 81).

The genetic scientist's solution would be to make sure children receive omega fatty oils as for example cod liver oil capsules or other forms of fish oils, which are said to improve the operations of the nervous system, but even this argument is doubtful and not directly relevant for the EFL teacher, but indeed very interesting. As far as the tests with IQ and reading level discrepancies are concerned, Olson et al. (1999) conclude: "...we failed to find significant differences in genetic etiology for poor reading defined by ability or IQ-discrepancy levels,..." (Olson et al 1999, 140). From these tests it is very

⁸ Taken from Stevenson J., Graham P, Greman G, McLoughlin V (1987) A twin study of genetic influences on reading and spelling. *J Child Psych* 28: 229-47.

⁹ Taken from DeFries JC, Fulker DW, Labuda MC (1987) Evidence for a genetic aetiology of reading disability in twins. *Nature* 329: 537-9.

doubtful whether one could invent profitable solutions to help children with dyslexia. Not only does IQ have little if any influence on the results of gene tests to prove similarities in reading and spelling deficits among genetically close related human beings such as with the monozygotic and dizygotic twins, but also there is no correct way of defining IQ. Which factors would be included and which not when testing the IQ of dyslexics and how important would the IQ factor be for determining possible genetic reading and spelling deficit similarities within families? One factor is definitely the environmental factor (Olson et al 1999, 146p.) From a social point of view these genetic tests with the use of IQ would only create more separation and hierarchy in the EFL classroom rather than positive integration between dyslexics and non-dyslexic pupils. Therefore more weight must be put on researching psychosocial factors than genetic ones.

Thus empirical studies such as those by Stevenson and DeFries can only present us with theory. Genetics leaves little room for practical improvements which meander back 'to the roots' of the deficit problems but do not help in improving the situation for dyslexics. For educational and social purposes, this helps little in solving the problems of recognition, understanding and integration of dyslexics in the EFL classroom. Moving in another direction, perhaps forward, would help see how the future of dyslexic children can/could be improved by changing the upbringing- and environment-related problems that were identified by the studies.

1.3 Dyslexia and other hypotheses using IQ.

Beaton just as Stevenson and DeFries uses the argument of IQ to justify and categorize different experiments with different age groups and competence levels with dyslexics. One should be critical in research results brought forward using IQ methods to segregate the different 'test objects', since the testing of IQ is in itself subjective and dependant on different external issues of children being examined such as social background, distance from/to school and each individual genetic talent which are not used in these tests. For example tests

carried out to test verbal learning and memory have been used in correlation with IQ testing. Results taken some time ago show that in an early investigation twenty-six children were tested between the ages nine to sixteen years which were sort out by their great problems with reading as the teachers pointed out. Twenty-two of them were going to special schools for children with above normal deficits. The calculated IQ of these children ranged from 111 to 50-69. The test was to repeat digits orally at a rate of one per second. The outcome was that the designated readers did better than the non-readers, and could read more digits in the time given (Beaton 2004, 72).

The mentioning of the range of IQ values here seems obsolete for such a test. From my point of view these values were used to segregate the types of children needed for the test, but it would have sufficed in taking children from a normal school and compare the reading results with verbal memory to those of children visiting schools for abnormal deficits. This test is also a problem due to the fact that more empirical studies should be carried out and more data gained in investigating how dyslexics can be integrated into the normal school system which would be more productive for both dyslexics and normal children. It is in our interest to create a fairer society and this should begin as soon as possible, namely at school. Analysing reading and memory skills in segregated schooling systems only gives us the facts, just as the IQ does. It would be interesting to see the results of the test if the children from both schools had started to read and write in the same classroom from the beginning regardless of IQ values. Would there be differences in phonological awareness and verbal memory i.e. cognitive ability?

On the other hand, to support the use of IQ factor, tests using IQ have shown that dyslexics have a disadvantage in short-term memory. Digit scans taken on the Wechsler Intelligence Scales for Children¹⁰ point out that in short term memory tasks the scores are worse for those less skilled at reading than others, although IQ between dyslexics and non-dyslexics were measured as being the

¹⁰ See

http://www.healthatoz.com/healthatoz/Atoz/common/standard/transform.jsp?requestURI=/healthatoz/Atoz/ency/wechsler_intelligence_test.jsp
or <http://www.minddisorders.com/Py-Z/Wechsler-Intelligence-Scale-for-Children.html>

same. (Rack 1994, 9) Still there seem to be similarities to what Beaton points out. (Beaton 2004, 72). Rhyming letters were used in this test for example the letters 'B, C, G, P and T' with the non-rhyming letters 'H,K, S,L, and Q'. The results were that the performance of the pupils was not as good on the phonologically confusable letters, this meaning as Rack rightly says...

Information is held in short-term memory in a phonological form.... Early reports suggested that dyslexics may not use phonological codes in short-term memory to the same extent as normal readers, since they tended not to show such a large difference between rhyming and non-rhyming letters. (Rack 1994, 10)

So the phonological coding by dyslexics is limited as compared to non-dyslexic children, a problem that could be associated with a deficit in brain activity.

1.4 The brain and the 'Cerebellum' Deficit Hypothesis

The cerebellum is a part of the brain that is responsible for our reactions and reflexes. It is responsible for our senses, how we hear, touch, smell, taste and see. This part of the brain plays an important part in our coordination and instincts, actions and reactions, also calculating our movements. It is also responsible for the way we speak. The reason why some people speak in a detached and rigid manner and others maybe smoothly and fluently depends to a great extent on the cerebellum. Through neural pathways information is sent to the muscles which carry out the movement as ordered from the cerebellum¹¹.

This is also the case with speech. "Phonemes between words and within words are...produced by muscles flexing the articulators..."(Fawcett/Nicolson 2005, 25p.). This means that language is produced through the cooperation between brain, muscles and nervous system, working together but still differently in respect in every living individual. The result of this is the movement of the larynx, pharynx, tongue, hard palate, lower palate, lower jaw, lips etc. (Fawcett/Nicolson, 25p). The flexible parts of the mouth area such as the

¹¹ See <http://en.wikipedia.org/wiki/Cerebellum>

tongue, jaws and lips are used to coordinate the phonemes to their most perfect position until they are uttered in the language we are communicating in. Of course we do not think about every syllable we are going to utter because that would be too strenuous. This is thus taken over by our subconscious. The nervous system, brain and muscles have to react according to stimulation given not only from the brain but also from outside, as for instance when crossing a road or answering a question. The eyes send a signal to the brain, which in turn send signals to the muscles when a traffic light is red. The signal 'red' means 'do not cross the road'. Likewise, when someone asks us a question, we know how to respond because of the way the sentence uttered by the other person is phrased, how the intonation and pitch sounds or even what facial expression is being used. The audio and visual information that we recognize is captured by our eyes and ears, which is then sent to the brain and prompts us to react. In this we are prompted to answer. Whether we answer or not is in most cases decided by the cerebellum in the brain. In some cases, our subconscious may react more heavily, such as in an outburst of laughter or crying. This is so if the brain cannot cope with the information given. All this that makes the cerebellum seemingly involved in almost all actions, whether speech or motor, whether explicit or implicit as Fawcett/Nicolson (2005) rightly point out. They even go further in stating that these actions and reactions to everything that surrounds us in everyday life and our own individual way in dealing with them have always been a part of our lives from early childhood, as we had learnt them from our elders. They are a part of our subconscious that are with us all the time, in all situations. The cerebellum as Fawcett and Nicolson very importantly state, is strongly connected to other parts of the brain such as the sub-cortical¹² regions which "...predicts the effects of muscular commands, and puts together complexes of movements designed to achieve the current goal." (Fawcett/Nicolson 2005, 27).

If this connection were not to function adequately, this would cause irregularities in the subconscious actions and reactions of human beings. People would by

¹² See <http://medical-dictionary.thefreedictionary.com/subcortical> and <http://medical-dictionary.thefreedictionary.com/subcortex>

mistake walk across the road by red light by accident or reaction strangely to questions asked. What does this mean for the dyslexic?

As already pointed out in Chapter 1.2, the ability for humans to read was not something genetically handed down as a skill, because as already mentioned people started writing 4000 years ago, as far as research goes, and illiteracy is still a great problem in countries where education is only a privilege for a minority. However, almost everyone can communicate in some sort of way, which I will bluntly refer to as language here, whether a person is educated or not. Thus dyslexics have language as a natural ability just like others. Reading, however, is a challenge that has to be mastered and the better the bodily functions such as the cerebellum adapt and automatize, the better the brain can concentrate on other chores and need-to-dos. If work between the cerebellum and the other parts of the brain such as the sub-cortex or nervous system is interrupted, automaticity does not take place as well, thus the cerebellum deficit hypothesis. When a dyslexic tries to read, the hypothesis says, his/her cerebellum cannot process the information well enough taken in through the eye sent then to the brain, which in turn has effects on the other parts of the body. Due to less automaticity, dyslexics have to concentrate more on trying to deal with information on the written page and with any other skill be it cognitive or motor. (Fawcett/Nicolson 2005, 28).

This is a fair point to make considering reading is a skill that has to be mastered just like any other in life, and requires coordination between various parts of the brain, but what is lacking in this hypothesis is the continuing problems of the dyslexic 'malfunction' in classroom and environment, since all ways to mastery are also driven by the relations between the individual and its surroundings. There may lie much truth, however, in the hypothesis of Fawcett and Nicolson, who point out that humans adapt automaticity to lower the performance of the brain and able it to cope with a higher number and level of activities. As their research points out:

We found that although a group of dyslexic adolescents were normally able to balance as well as 'controls' (non-dyslexic children matched for age and IQ), their balance deteriorated

significantly when they had to do something else at the same time, whereas the controls' balance was not affected at all. We tried a range of secondary tasks, including counting or pressing a button on hearing a tone (and also we tried blindfolding them to prevent the children from consciously attending to visualize cues when trying to balance) and found the same pattern. (Fawcett/Nicolson 2005, 28)

This study shows that if the brain has to compensate for a functional deficit, then it is not able to carry out functions simultaneously at the same perfection. This may also be reason for the clumsiness dyslexics often suffer from. This is called dyspraxia or developmental dyspraxia. Dyspraxia can be split up into ideational dyspraxia which implies the difficulty with planning a sequence of coordinated movements, and ideo-motor dyspraxia which implies difficulty with executing a plan, even though it is known¹³.

All dyslexics will, from time to time, experience some degree of dyspraxia because of disorientations. It shows up as a chronic condition in only about ten to fifteen per cent of dyslexic children. Like the other aspects of dyslexia, it varies in severity. (Davis 2007, 63)

Davis' analysis supports the studies of Fawcett and Nicolson, in that the dyslexic children have automaticity problems in and out of the classroom. Due to this deficit, dyslexics have be taught everything more explicitly in class and thus in the EFL classroom. Skills have to be explained in more details and more effort has to be made by the teacher to keep the concentration of dyslexics on the subject because of their tendency to daydream probably caused by the lack of concentration.

Dyslexics lack not only the reading skills that are just 'picked up' by normal children, but they also have problems on the phonological side, since "phonological awareness is a skill that is picked up initially just by listening to one's own language..." (Fawcett/Nicolson, 28p). This problem has been taken up in the Phonological Deficit Hypothesis.

¹³ See <http://en.wikipedia.org/wiki/Dyspraxia>

1.5 The Phonological Deficit Hypothesis

This hypothesis which includes the cognitive and visual deficits in reading as well as the processing deficits i.e. spelling and handwriting problems, deals with the fact that “...reduced phonological awareness is associated with impaired reading skills...” and “...poor phonological skills lead directly to poor reading.” (Beaton 2004, 65). Phonological awareness is very important to understand that the sounds which make up a word are characterized by a grouping of individual letters. This is the phoneme-grapheme combination. A normal child takes the phonemes given and can convert them into graphemes successfully for his/her age and mother tongue, second language and/or foreign language ability, in our case EFL. With the dyslexic this conversion is much harder due to the fact that this process of taking the letters that represent different sounds and putting them into written words is undermined. As Rack states the phonological deficit hypothesis deals with “...a deficit in the processing of phonological information – information about the sounds of words...” which is “...at the root of most dyslexics’ reading and spelling problems”.(Rack 1994, 5). This theory can be widened by saying that this deficit can affect different aspects of phonological processing. A lack of auditory perception would for example delay the acquisition of letter-sound correspondence rules (Beaton 2004, 67).

This would as a consequence mean that some dyslexic children would learn to read at different speeds from others, and would have different individual problems with creating sounds from the words given to them to convert. Moreover, the difficulty level of the task varies from child to child whose needs and abilities are absolutely individualistic and need to be developed in their own independent way. It is nevertheless obvious that reading helps to analyse the sound structure of words as a fair amount of research has shown but:

One might expect developmental changes in children’s phonological representations, gradually moving from a more holistic to a more segmental level of representation with increasing age,...to lead to awareness at a phonemic level and hence to the acquisition of reading . Yet exactly how this occurs, and how individual differences in phonological segmentation ability arise, has yet to be worked

out in detail.” (Beaton 2004, 68).

Rack goes further by stating: “Dyslexic children are therefore something of a puzzle: they are poor readers and spellers, but there is no obvious reason why this should be so.” (Rack 1994, 6) So what is to be made of this theory? It states that dyslexics have difficulties in converting letters representing a string of sounds into words, thus the ability to read and improve reading is restricted at an individual level. However, the question of individuality is from my point of view obsolete because with normal children we find some who can process phonemes into graphemes faster and in the long run better than others i.e. those who are better at reading and at developing their reading skills depending on age. Just as with genetics and the brain theories, there is no significant mentioning of environmental factors such as educational, social or political agendas, which leaves the phonological deficit hypothesis, stand as ‘holistic’, as Beaton uses the word, which means it is seen as it is, not taking any other factors into account such as external ones already mentioned. Rack (1994) argues too that understanding the problems of dyslexia is important for parents, teachers who may...“feel responsible for the children’s difficulties”.(Rack 1994, 6). Thus a positive solution must be found to integrate children with reading and writing deficits. What Rack also points out is that a positive definition of dyslexia could also include children that are not necessarily dyslexic, but have reading and writing problems due to abuse at home or school, due to negligence that needs to be looked into from a psychological point of view¹⁴.

It would be interesting to find out how many children would be classified as dyslexics although they are truly not. It is one thing to say that children with these deficits are born with them i.e. hereditary and genetically as already discussed, but it is even more of a serious matter not to pick out the ones that ‘just’ struggle at school due to factors that can be more easily solved i.e. through well-educated teachers and a school system that works well with parents and psychologists, school counselling, social workers and the law. After sorting this out, one ought to attend to the specificity of the phonological deficit

¹⁴ It is also important to mention the effects of the hypotheses are not only related to dyslexia but also to social and environmental problems.

hypothesis, specific because it may not be so easily 'cured' by eliminating external factors already mentioned, perhaps the main cause for the problems dyslexics have.

This may be just a starting point, since dyslexia is discovered at the very earliest when children start to read and write. In effect intervention can be taken and has proved to improve phonological awareness and/or reading, but it is important that any kind of improvement strategies must have their aim in helping the dyslexic to cope with his/her problems effectively moving them in a positive direction (Beaton 2004, 71) with which I agree.

Some have hypothesized that there could be a connection between poor phonological processing and impaired verbal memory. It would be plausible that the memory problems could be held responsible for the lack of being able to hold each individual phoneme in mind as part of a sequence of phonemes in reading strategy. This would mean that phonological recoding is of importance for the child to be able to automatize words and word sequences, something that dyslexics find more difficult, thus it would be of importance to experiment using such tests as associating random shapes and non-words, comparing vocabulary with digits. Tests using children from different ages and levels have brought forward results showing that not much difference is seen with non-words and digits for age and class, but there seem to be discrepancies as far as words and vocabulary are concerned. Here phonological recoding is individual and there is a fair amount of phonological sensitivity that varies through the range of children from different grades and reading skill levels (Beaton 2004, 72).

Thus according to reading sensibility and ability tests, should there be classroom segregation or integration between dyslexics and normal children only as far as cognitive reading ability is concerned since as far as Beaton points out, there seems to be little difference with nonverbal and digit spans? On the non-word tests dyslexics have the same if not above-average abilities perhaps to compensate for the word reading deficits.

As Rack points out, some studies have been carried out to show how short-term memory problems may have an eventual impact on long-term memory. This is of importance when studying dyslexia and EFL since we do not only want to know the synchronic state of dyslexic children's problems and how it comes to pass, but for the teaching of EFL it is important why and how this progresses in the long run, so that teachers know how to respond and/or adapt to the difficulties in the long run. What is very important for dyslexics whose memory span is at least in the short-run worse than that of normal children, is to go over the material trying to be memorized. However, Rack states that dyslexics and non-dyslexics may in the long-run "...attend to different properties of stimuli and/or encode stimuli in a different manner in long-term memory. (Rack 1994, 12p). He tested this by using a cued-recall experiment where both dyslexic and non-dyslexic children had to compare rhyming pairs and non-rhyming pairs both visually and audibly. The outcome was that the dyslexics had almost the same success phonologically but were not so successful visually. Rack came to the conclusion that dyslexics use different or more codes and that they do not only use the phonological code to memorize. The test was then made using only visualisation between pairs that were visually similar such as 'boat ' and 'moat' and pairs that were visually different such as 'rope' and 'soap'. But now, the dyslexics as opposed to the previous test made better improvements on the visualisation, so Rack concludes that there must be some kind of visual memory code that dyslexics use. (Rack 1994, 13) This would indeed show that dyslexics "...make less use of a phonological coding in long-term memory..."(Rack 1994, 13) than the non-dyslexic children.

So in the long run, according to Rack, dyslexics have a different internal system or method of breaking up the information given to them in a phonological or visual way as opposed to non-dyslexic children. They have their own coding system to adapt in the long-run to changes, which leaves a great amount of questioning as to how the EFL classroom should be run in the long-run. If dyslexics are able to progressively change their code as well as non-dyslexics despite the 'retardation', then it should be possible to integrate them into the classroom despite of the fact that as according to Rack they use less phonological coding in the long-term. Apart from having the problem of reading

in certain areas where phonological processing is involved, other deficits would have to be looked into such as the deficits in misinterpreting words or having problems in pronunciation. Dyslexics also have problems in describing pictures in words, inconsistency is found between word-naming and word-meaning, these as a result of certain phonological deficits.

This hypothesis thus presents one of the main problems that dyslexics have, namely converting phonemes to graphemes properly, hence deficits in reading and writing. Thus reading, spelling and writing strategies will have to be moulded to suit the individualistic preferences and talents of each child, whether dyslexic or not. In correlation, developing their personality and finding their identity as social beings is just as important for success.

Chapter 2 Dyslexia in a social context.

2.1 Epidemiological studies on dyslexia.

It is still difficult to discuss dyslexia in its social context since most of the studies on the topic have been carried out in clinics for special assessment or remediation. If more boys than girls are sent to these clinics, does this mean that boys tend to be more dyslexic than girls? Maybe teachers and parents show more concern for boys or maybe only children with both reading and emotional problems are sent to the clinics and not those who only have reading problems. These are biased reactions from people who send such children there. It would benefit the matter as Jorm points out by taking the whole population and finding out who is dyslexic and who is not. Still dyslexia can more frequently be found in "...certain types of communities, in certain types of families, and in certain types of school." (Jorm 1983, 6).

This would emphasize the fact that dyslexia is socially based, and not genetically. Jorm (1983) also points out that dyslexia does not only show up in reading problems but also in social behaviour and also in academic subjects other than reading.

Jorm looked into several epidemiological¹⁵ studies carried out in Britain and abroad and sums up the results as follows:

- Sex difference – males are more often sent to clinics than females which appears to occur in many countries. Some have claimed that this is because of a genetic factor i.e. a gene that manifests itself in males more than in females. This has been linked to other tests such as colour blindness that shows up more in males than in females due to a specific gene. However, there is no 100% proof that genetics is the cause of this,

¹⁵ Epidemiology is the study of factors affecting the health and illness of populations, and serves as the foundation and logic of interventions made in the interest of public health and preventive medicine. See <http://en.wikipedia.org/wiki/Epidemiology>.

or if environmental factors are responsible as well, or both. (Jorm 1983, 11)

- Social class difference – One might think that social class has an effect on the reading capabilities of children, and that there are more dyslexic children in the poorer classes than in the richer ones. This is not so since a study taken on the Isle of Wight shows otherwise: children were placed in four groups according to the jobs of their fathers namely in the groups semiskilled or unskilled, skilled, non-manual or clerical including minor supervisory grades, and professional or managerial. Interestingly enough more children with specific reading problems were found in the group of skilled fathers with 58% and ‘only’ 24% with the children of semiskilled or unskilled fathers. For the top two groups the percentages were 8% and 6% respectively. We can say that the level of reading disabilities is extensively less in the top groups because reading is crucial for professional and clerical jobs. If children from these groups have reading disabilities they may opt for the next lowest group of jobs namely the skilled ones, where the percentage of dyslexics is highest. As Jorm points out there is a history of reading deficits in families of children who have problems with reading. (Jorm 1983, 12)
- Family characteristics – following on, Jorm points out that there have been interviews with families who have stated that there have been reading disabilities in the family in preceding generations. Moreover, children with reading difficulties tend to come from bigger families and tend to be the later born which points out that dyslexia could be partially hereditary because parents spend more time with their children if there are less of them and thus are able to help them with reading and writing at home. Can we take interviews seriously taking into account that some families may not state that there are/were family members with reading disabilities? A study carried out in London with a working class population shows that children who have their mothers listen to them while reading have a lesser chance of obtaining reading difficulties. (Jorm 1983, 14)

- Community and school characteristics – Taking and comparing the two tests from the Isle of Wight and London, Jorm points out that reading disabilities are twice as common for 10 year olds in London than on the Isle of Wight. This means that community differences in terms of family and school influences are responsible for the different results in these epidemiological studies. Moreover the studies showed that in London the schools tested had more teachers and pupils, a higher rate of absenteeism, more immigrant children, and a higher proportion of children receiving free meals. This shows that the social environment has an effect on the number of children with reading disabilities. However, the physical and administrative features of the school such as the class sizes or the age of the buildings did not have any relation to the achievement of the children as far as their academic achievement and social competence were concerned. (Jorm 1983, 16)

Jorm summarizes that there seems to be a causal link between antisocial behaviour and reading retardation: first, antisocial behaviour results in reading retardation, second that reading retardation causes antisocial behaviour and third, common causes such as family circumstances cause antisocial behaviour and/or reading retardation. (Jorm 1983, 19)

To sum up Jorm's investigation, we can say the reasons for reading disabilities are complicated, diverse and involve many different factors that interconnect with one another such as age, location and upbringing of the children involved. The main points Jorm questions concerning reading disabilities are the social and hereditary ones which he also tries to relate using different empirical studies including families, their children and their social environment. Due to the few studies carried out and the manner through which the tests were conducted i.e. interviews, the answer to the question what causes dyslexia cannot be answered so easily through the mere studies of dyslexia in the social context. Therefore I will now focus on the individual and its relation to its surroundings which may reveal more on the topic of dyslexia in a social context.

2.2 Personality and identity.

As human beings we are each individual in our habits, potentials and characteristics, but we are also social living entities who are dependent on their surroundings in which they live. Due to this we function in relation to our surroundings and to those close to us. Closest to us, apart from ourselves, are our partners and families to whom we have the closest relationship, then our friends, then colleagues at work, neighbours, our doctor etc. At the outer part of the spectrum we have our national identity or membership at a club for example, which gives us the feeling that we belong to a group, or just the fact that we belong to the 'homo sapiens' species as opposed to other living creatures on earth. Important is the fact that we need to identify ourselves with something that reflects what we are or what we want to be. To a mother, we are the son or daughter, to a partner, we are the other half of an intimate relationship, to our employer we are the employee, for our country we represent the people who live in it, the culture, the history, the flag, the geography and the place we may call home. Important is the fact that we belong to something and that this something wishes us to belong to it reciprocally. So identity is not only about what we are but also "...suggests some active engagement on our part...which requires some element of choice". (Woodward 2000, 6)

On the other hand we must be careful not to refer to personality as identity. They are two different matters. The former is that what we are made of i.e. our internal characteristics, whether we are phlegmatic, introverted, hectic or jovial etc. The latter is our identity which can also be more than one, thus multiple identities (Woodward 2000, 7). There may be many things with which we would like to identify ourselves with such as pop stars or film actors. Sometimes we are automatically placed in the role of multiple identities such as someone who is housewife, mother, employee and student. We may also see ourselves the way we would like others to see us, but they do not do so, such as someone who thinks he/she is hard-working in their company but is seen by the other colleagues as a constant nerve and chaotic. This is a 'false' identity. We can of course expand and claim that our nationality is better than others for certain reasons as we may have the best football team or the greatest Royal Family,

which may not be seen so by people of other nationalities. They may see us as having the most corrupt politicians or the worst cuisine. So our imagination plays along and more often than not "...we symbolize the sort of person we want others to think we are through the clothes we wear and the ways in which we behave." (Woodward 2000, 12)

Till now we have discussed personality and identity solely at the conscious level, the relationship between the individual and its surroundings as Storr points out:

Das Verständnis von 'Ich' hängt von der Wahrnehmung des eigenen Körpers als eines gesonderten Wesens ab. Ist es einmal existent, agiert das Ego als Vermittler zwischen dem Es und der Außenwelt. (Storr 1989, 59)

which leads to Freud and psychology. Through our unconscious we are also driven to take up different identities for different occasions depending on the situation. As Woodward points out, this unconscious is our way of adapting to our environment in order to make our lives easier or to be more accepted for what we are or want to be, depending on our hidden desires. It would be very tedious to walk through life always thinking about every movement and gesture we make or want to make. Our unconscious does this for us. It moves us in the position we desire, which may also change through various stages of our lives. Our unconscious is also responsible for 'bringing up' desires which we have voluntarily or non-voluntarily kept hidden since childhood. Repressed feelings may have a positive or negative effect on how we will be as adults, a matter that Freud took up and brought in reference to our sexual and gender identities (Woodward 2000, 15pp.).

So as far as personality and identity are concerned, there are three different approaches according to Woodward, namely:

- Visualisation, symbolization and imagination of individuals structured by the use of existing language and symbols,

- The conscious use of roles to symbolize what we want to be or what we want others to think we are structured by the ideas and plans we have already made up intentionally in our minds,
- The finding of new roles in later life that may have been neglected in childhood, have always been there, but have never been 'activated'. This is structured by social forces that work at our unconscious. They shape our identities. (Woodward 2000, 18)

The first of the approaches deals with identity as something naturally given, since there is no motivation or action on behalf of the individual and its surroundings. In the second approach the motivation or action moves intentionally to either positive or negative depending on the temporal shift in the situation. The third motivation or action shifts from negative to positive since the unconscious as Freud claims, drives us to 'haul up' undermined parts of our characteristic from the past into the present that affects the future.

Drawing on these approaches we can summarize that the individual is linked to the social which may work consciously or unconsciously. The process whereby people recognize themselves in a particular identity and think 'that's me' is called interpellation. (Woodward, 19) So how does the problem of dyslexia fit into this concept?

2.3. The dyslexic – personality and identity problem?

Until the time at school when children learn to read and write, the problems of dyslexia are not discovered since as we already discussed the main problems of dyslexics are their under-average ability to read and write. Looking at these approaches one could hypothesize that:

- Visualisation, symbolization and imagination of individuals structured by the use of existing language and symbols are impaired due to the fact that dyslexics have problems with reading and writing.

Dyslexics are aware that they cannot 'compete' in classroom activity as well as other children, and will see themselves as not good enough in the group i.e. they would suffer from feelings of inferiority. This distorts concentration and conceptualisation and will have an effect on the personality i.e. emotions and habits and as a result daydreaming, being afraid to speak out and/or aggression are the consequences. The question concerning symbolization is predestined in the fact that the dyslexic will then not be able to symbolize the sort of person he/she wants others to think they are through clothes and behaviour in exactly the same manner as normal children (Woodward 2000, 12), knowing that he/she has deficits in class.

- The conscious use of roles to symbolize what we want to be or what we want others to think we are structured by the ideas and plans we have already made up intentionally in our minds is impaired due to the fact that dyslexics reflect that they have deficits in reading and writing.

This conscious knowledge that the dyslexic has concerning their deficits and the way he/she feels towards him-/herself and his/-her surroundings has its consequences. They go in two different directions. On the one hand if the child has an extraverted personality he/she would try to compensate for the deficits by pretending to be more than he/she is, thus try to escape into another identity in order to present him/herself better to his/her fellow-pupils, teachers and parents. This could go as far as trying to manipulate teachers into receiving good grades or disrupting the class in order to seek attention. With this the pupil is actively destroying any positive identity between him/herself and his/her surroundings, not knowing he/she is doing so. On the other hand the introverted dyslexic would become insecure and reserved, emotionally restrained, would have fear of going to school which in the most serious case may lead to the child not attending lessons at all or would build up aggression that is does not let out as Storr points out:

Je mehr jemand seine Aggression gegenüber anderen zurückhält, desto wahrscheinlicher ist es, dass er sich selbst bestrafen wird. (Storr 1989, 68)

Teachers should look out for these kinds of tendencies. In class the pupil will daydream or concentrate on other matters than abiding by listening to the teacher or taking part in class activity, which is destructive.

- The fact of the finding of new roles in later life that may have been neglected in childhood, which have always been there, but have never been 'activated', is impaired due to the fact that dyslexics have problems with reading and writing at school. The structures of social forces that work at our unconscious, that shape our identities will have a different effect on children with deficits at school caused by dyslexia

The unconscious would be very strong in grown-up dyslexics whose hidden desires were undermined as a child through negative symbolism and identity as a cause of dyslexia. Strong hidden desires would be the result. Many dyslexics could lose the right path and wonder into a dream world. The awakening from it would then be very intense. (Storr 1989, 18). The perhaps positive aspect of the unconscious is however to still lead the mind into believing that all is well, although in reality it is not. This is an escape route for the brain and may have the consequences of one day waking up with abnormal sexual desires or the feeling of repeating a part of the past that was neglected or undermined as a child through dyslexia. The social competence may have to be redirected and social identity reconstructed as a result of vicious circles leading from dyslexia to bad grades at school, thus obtaining bad jobs and even becoming criminal in the worst scenario. Behavioural patterns and attitudes to the social environment will have to be redirected through psychologists who may find it very hard to redirect the unconscious of a dyslexic that has become used to escaping from a healthy personality, and has a dislocated attitude to its environment. For scholars this brings up the question as to whether dyslexics have an above-average rate of psychological disorders.

To sum up, it must be in the interest of society, especially the education system to equip teachers with the social scientific knowledge that children are very much dependant on their social environment, as far as identity and personality are concerned. They must be given the feeling of being accepted the way they

are, that they are being taken care of by setting realistic and fair standards. Integration into normal classroom life must not only stand up to physical standards but also mental ones, which means adapting teaching and learning strategies to provide for harmony in personality, symbolization, identity and unconscious. More effort will have to be made from the teacher's point of view since:

“...children's impressions of the world are centred around themselves and they find it difficult to see things from another point of view or to imagine how other people might perceive and understand the world.” (Hinchliffe/Greene 2000, 30p)

which makes dyslexics very vulnerable to wrong teaching methods which I will be discussing in Chapter 4. The correct teaching methods play an important part in the development of dyslexics in view of the curriculum and social competence.

2.4 Developmental Dyslexia and the social component.

We have just looked at the problems facing dyslexics in view of social and psychological aspects. Now I would like to reconsider the genetic factor, and how this plays a role as far as dyslexic children and their social environment are concerned. Indeed, the character and the personality of a child is not only made up of upbringing and environment but also by its genes: “...the genetic and biological make-up of a child is often thought of as making up its ‘nature’” (Hinchliffe/Greene 2000, 28). Hinchliffe/Greene point out, however, that there is more to this, namely with the word ‘nurture’. This refers to the quality of nurturing the child receives. In a broader sense this includes the “...social situation in which a child is brought up and all the ways in which the family and society impinge on the individual child”. (Hinchliffe/Greene 2000, 28p). I agree that ‘nature’ and ‘nurture’ are the two factors that determine how a child will grow up, leaving out the environmental factors.

Hinchliffe and Greene point out that even in the earliest stages of life, the lack of nurturing has an effect on very young children. When the children are separated from the mother, they first of all cry, showing emotional response. If this lasts long enough the child becomes apathetic and behaves as if it does not really care. Moreover, when the mother comes back, instead of greeting the mother with joy, the child reacts with rage and anger. (Hinchliffe/Greene 2000, 29).

The reaction of dyslexic children to negligence can be seen in the same way¹⁶. The need for extra attention by the dyslexic is imminent after the child has realised it cannot compete with the other children in class who can read and write better than itself. If attention is not given, the child will seek attention in a negative way that may in the long run have negative consequences on its future life, as I have already mentioned before. It is as with the importance of the mother nurturing her child that the teacher takes over the nurturing role if he/she has children in the classroom that have difficulties in reading and writing. Of course the relationship between mother and child is more intense than the relationship between teacher and pupil, but we are looking at the problem here from a social point of view and not from an emotional one between mother and child/teacher and pupil. In both cases the child should be made aware of the fact that it is not being left standing alone. Behavioural patterns of the teacher should be to communicate with the dyslexics, making them feel that they are part of the 'social group' classroom. Given that the syllabus is not directly the 'fault' of the teachers, makes it hard for classroom activities to function if not laid out for the inclusion of dyslexics. It would be laid into the hands of the teachers themselves to adopt ways of integrating dyslexics in their classroom management keeping an eye on how children with reading and writing disabilities develop.

Piaget's theory¹⁷ using four stages¹⁸ shows how children's cognitive abilities develop from birth to 12 years and upwards. He also took into account that children cannot skip stages, for example a child cannot learn mathematics until

¹⁶ See Woodward's three approaches on page 22.

¹⁷ See Piaget, J. (1926/1962) *Language and Thought of the Child* (3rd edn), London, Routledge and Kegan Paul.

¹⁸ Taken from Hinchliffe/Greene, page 33.

it can learn to count, it cannot learn how to speak in a foreign language until it has learnt enough vocabulary and grammar, and that each child develops at a different rate (Hinchliffe/Greene 2000, 33). These can then be used to see how dyslexics stand in a social context:

- Stage 1: Sensoric-motor (birth to about 2 years). Here the child has active responses to objects, learning to control them. The acquisition of language is very important.

It is not possible to find out whether the child is dyslexic at this stage since it is too early for the child to read and write. Even those that argue dyslexia is genetically based, cannot discover the deficits that dyslexia causes.

- Stage 2: Preoperational (from about 2-7 years old). This is the time when the child has a lack in performing logical operations. They do not understand the real cause of events. They do not understand the logic of numeric operations and go by appearances. They are egocentric¹⁹ and do not understand someone else's point of view.

At this stage in development, one may notice signs that could be linked to dyslexia later such as apathy or aggression, but this most probably lies in the nature of the individual than in a genetic disorder that may lead to dyslexia, or in neglect and/or abuse in the child's social surroundings.

- Stage 3: Operational (from about 7-12 years). Logical and numerical operations are beginning to be understood by the child, which are carried out in relation to concrete objects that they can visualize. They are not so egocentric anymore since they can begin to understand the intentions and opinions of others.

This is the part of the child's development where dyslexia is discovered or ought to be. The child has the ability to reflect what he/she is doing and can compare itself to other children in the classroom. He/she learns to read and write. If the

¹⁹ Here meaning focussing on one's own needs.

teacher has not discovered the disabilities which the child senses in itself and produces in its oral activities and in its written ones in class and at home, he/she will start to reflect that he/she is not good enough at reading and writing, which may then lead to the problems already mentioned at the beginning of the chapter concerning symbolization, identity and social intelligence if actions are not taken on behalf of the teacher whose responsibility it is to take deficits seriously.

- Stage 4: Formal operations (12 years and onwards). Here logic can be used to understand abstract systems like maths and the logic can be used to reflect on events which are distant in time and place.

As the intelligence and perception of children progress so does the dilemma of the dyslexics if they have not yet been dealt with. At this stage the dyslexic will be able to reflect much more on his/her achievements in class, and will do so according to his/her nature, and the way he/she feels towards his/her surroundings.

Through Piaget's theory we can see how children's intellectual skills differ in the preoperational period and the more advanced operational ones. For studying the paradigm of the dyslexic school child with Piaget's theory, we can conclude and hypothesize:

- The dyslexics can only realise their deficits in the operational stages when they begin to understand logical and numerical operations and understand the intentions and opinions of others.
- The teacher can only recognize disabilities when the child has begun to read and write thus in the operational stages.
- After the operational stages have commenced (at the age of 7), the problem of dyslexia does not only unfold itself as a reading and writing disability but also as a challenge in the social context of child, teacher, classroom and familiar environment.
- There is no way of finding out from a social scientific point of view if dyslexia before the operational stages is genetically routed since the child

does not have enough social intelligence in these stages so one would have to search for answers at the operational and formal operational stages.

Chapter 1 and 2 have mainly aimed at introducing dyslexia with reference to different hypotheses and arguments from different angles, outlining possible causes and discussing symptoms. Furthermore, a closer look has been taken at how the individual dyslexic 'interpellis' with his/her surroundings from a social and psychological point of view. This forms a basis for the next chapters on problems and solutions concerning dyslexia and EFL in connection with approaches to teaching and classroom management.

Chapter 3 Dyslexia and EFL – approaches to teaching and classroom management.

In the forthcoming chapters I now move on to discuss problems facing dyslexics in the EFL classroom and present different points for different ideas and concepts on approaches and methods regarding EFL learning and dyslexia. Not only will the problems of reading and writing be discussed in connection with EFL, but also other issues concerning dyslexia and EFL such as the psychological and social ones. In reference to dyslexics and their reading and spelling difficulties, theories and ideas will be discussed and possible solutions presented in light of possible rethinking for teachers, educationalists, and policy makers towards improving syllabus and teaching standards and concepts. It would be of importance to develop concepts and ideas for integrating and teaching dyslexics in the best possible manner.

3.1 The problematic of EFL learning with dyslexia.

A survey was carried out by Robertson in 1991 to show how happy dyslexics were with the subjects they were learning. Apart from Mathematics, modern foreign languages were the most disliked. This may be due to the discrepancy between the tasks demanded and the ability of dyslexics to learn the subject. Robertson points out that the difficulty of learning modern foreign languages such as English may be due to the nature of the skills involved namely the sequencing, short and long-term memory and phonological skill. These determine the retention of vocabulary and the mastering of grammar. Important is also whether the dyslexic can segment words in the foreign language into phonemic sounds and then reproduce them. (Robertson 2000, 203).

Although English is a non-inflective language, it is very much related to other European inflecting languages such as German and French, thus there will not be much discrepancy as far as phoneme-grapheme de- and en-coding, word sequencing, and pronunciation are concerned when compared to languages such as Arabic, Greek, Eskimo, or Chinese which are constructed quite differently than English as regards phoneme-grapheme coding, symbols used,

word-meaning relationship and sentence structure. One could refer to the different sentence structuring of agglutinative and isolating languages here. Still dyslexics find it difficult to learn the language 'next door'.

One would think this be easy because the knowledge needed to acquire a foreign language ought to be as easy as acquiring it in the first language. This may be true since there are similarities in languages such as the fact that sounds are represented by letters, which in form of word units make up sentences that encode meaning. This is done by speaking and writing. So if languages are constructed so similar why should dyslexia pose extra problems for EFL learners than for native language learners? A major problem is the fact that dyslexics not only have problems with reading and writing but also have problems in transferring information from one code (L1) to another (L2) or vice versa. Another problem is the fact that L1 is acquired 'naturally', as a communication tool or equipment given to every human being, as opposed to L2 which has to be acquired after a certain age and does not develop naturally from the environment and intimate social surroundings after birth²⁰. Therefore dyslexics have to overcome two problems in EFL learning, namely learning the foreign language and coping with spelling and reading deficits which makes teaching/learning more difficult. Therefore the educator not only has the role of teaching EFL in class but is also required to help children with dyslexia, which has to be defined for the classroom.

3.2 Defining dyslexia for the classroom.

Teaching dyslexics is not such an easy task since many aspects of class activity and class management have to be altered to guarantee an effective inclusion of children with reading and writing deficits into the teaching system which under normal traditional standards is laid out for normal children. Peer/Reid affirm that a Government Task Force in the Republic of Ireland investigating dyslexia in 2001 came up with ideas as to why Dyslexia happens. They presented the ideas that difficulties with learning in correlation with reading and writing discrepancies

²⁰ With exception of bilingual and multilingual children.

- occur across the lifespan, and may manifest themselves in different ways at different ages;
- may co-exist with difficulties in the area of the number;
- may be associated with early spoken language difficulties;
- may be alleviated by appropriate intervention;
- increase or reduce in severity depending on environmental factors;
- occur in all socio-economic circumstances;
- co-exist with other learning difficulties such as Attention Deficit Disorder²¹, and may or may not represent a primary difficulty. (Peer/Reid 2003, 15p.)

Looking at these points we can say that teachers of EFL and indeed any other subject should be on the 'lookout' for children with not only reading and writing deficits, but those that have problems with Mathematics and numbers, perhaps more evident in other subjects than English as a Foreign Language although as Peer/Reid point out the problems of Dyslexia may be associated with early spoken language thus first recognizable in L1 and then in L2. It would be interesting to find whether language teachers spot the symptoms of dyslexia better in mother tongue learners than second language ones. Since the mother tongue is the first language picked up 'naturally' by the child, one can assume that deficits will be easier to pick out here first. With foreign language learning it would be harder to tell whether or not the child has reading and writing problems attributed to dyslexia; it may just not be good at or interested in learning foreign languages. We all know from school that everyone has their own interests and even a child learning a foreign language at the age of 9 will have its own interests in the subjects it has to learn.

On the other hand, if patterns along the different subjects are similar regarding inattentiveness, writing and reading problems, hyperactivity and problems in the area of number, it is a likely sign according to Peer/Reid (2003, 16) that the child is dyslexic. For the EFL teacher it would be important to find out whether the child really has problems in converting English phonemes to graphemes and thus to word and text, or if the child is just not interested in languages or

²¹ See http://en.wikipedia.org/wiki/Attention-deficit_hyperactivity_disorder

genetically not a language learner. Some children are genetically more talented at some subjects than others, which may also account for reading and writing problems. From point of view of the EFL teacher, it would be vital to have a working concept for dyslexics in the classroom. Peer/Reid hypothesize that there are certain aspects that should be included when formulating an operational concept of Dyslexia:

- recognition of a different processing style which can highlight good problem-solving skills and a degree of creativity;
- possible disadvantage in left hemisphere processing with resultant difficulties in phonological processing;
- discrepancies in performances in different areas of the curriculum;
- descriptive general observable behaviours associated with dyslexia, including strengths; and
- practical implications for specific contexts – classroom, training course, assessment, workplace, careers advisers, employers. (Peer/Reid 2003, 16)

Peer/Reid have not only pointed out the discrepancies in different areas of the curriculum as I have already mentioned between teachers in different subjects, as well as the question of career advisers and workplace, but also useful propositions to introduce different processing styles that would stimulate the above-average creativity that dyslexics have:

In the dyslexic, the creative urge is profoundly stronger than in individuals who do not possess the dyslexic's basic abilities. Because of picture thinking, intuitive thought, multidimensional thought and curiosity, the dyslexic's creativity is greatly enhanced. (Davis 2007, 109)

Peer/Reid point out that the strengths i.e. the positive aspects or ones that lead to them must be taken into account when defining a concept to help dyslexic children make use of their talents and teachers to help develop the talents of these children likewise. They also state that it is important to have definitions which bring policy makers to think about what is correct or not and bring

teachers to learn how to cope with dyslexics. Thus Peer/Reid have come up with the concept of overlapping dimensions (Peer/Reid 2003, 17p.):

- Neurological/physiological – the patterns of processing in the left and right parts of the brain show are different by dyslexics. Due to having a more ‘artistic’ or ‘creative’ side, dyslexics are better at completing tasks with a more holistic approach pending in the right hemisphere. The left hemisphere which processes details and small amounts of information, is the cause for dysfunctional behaviour in dyslexics, if not functioning properly, and is to ‘blame’ for their creativity and random thinking which may give them an advantage over other children in subjects such as art and music. (Peer/Reid 2003, 17p.)

For EFL teaching one could introduce classroom activities and exercises, written and oral, specifically aimed at developing and promoting the creative and artistic skills that dyslexics are said to have.

- Cognitive - Here the problems of phonological processing are highlighted. Three hypothetical problems are mentioned that could be the reasons for deficits in reading accuracy and fluency, namely in tasks of phonological processing, naming speed, and orthographic factors. For this reason some tests for measuring speed of processing and semantic fluency should be carried out. Meta-cognition which is the awareness of what one perceives plays an important role in helping dyslexic children because it helps them to reflect on their own awareness. This in turn helps to self-regulate or modify self-awareness.²² Meta-cognition helps dyslexics balance out difficulties by recognizing their own awareness i.e. what they perceive, which in effect leads to inappropriate learning behaviours in reading and writing. This also applies to automaticity²³ and the fact that dyslexics take more time to learn correctly and/or by heart; as already explained pupils with these deficits cannot memorise as well as non-dyslexics, may not be able to form proper learning habits and may therefore find it difficult to

²² See <http://en.wikipedia.org/wiki/Metacognition>.

²³ See Chapter 1.3.

change faulty learning habits which they may not even realise. (Peer/Reid 2003, 18p.)

For the EFL teacher this would mean 'being on the look-out' for children stuck in false pattern learning or learning habits that are going in the wrong direction. The role of the teacher would be to confront them with the mistake, then take the time to teach them the correct automaticity. As with all trials and ideas there is no 100% chance of success, but nevertheless the EFL teacher should aim at meta-cognition and automaticity. This would strengthen the reading and writing skill of dyslexics and lead them to succeed in their tasks.

- Education/classroom dimensions - It is of utmost importance that policy makers help make life more easy for dyslexics through staff development, classroom-based assessment, computer programmes and curriculum materials specially devised for dyslexics. This would be a start in the right direction after the policies themselves change. Due to the Disability Discrimination Act that was introduced in 1995, disability legislation also applies not only to the workplace but also to educational institutions in the UK. This also eases the relationship between teacher and parent, in so far that the teacher can refer to a policy which both can understand and the teacher can abide by. Many schools have adapted to new laws and have become dyslexia-friendly, as they have realised that many potential candidates for higher education do not get the required attention at school thus leaving their talents going unnoticed and unsupported. (Peer/Reid 2003, 20p.)

3.3 Diagnosing dyslexia in the EFL class.

Teachers should take aim at finding out if there are children in class who have reading and writing disabilities. Second, the teacher should find out if these disabilities are caused by problems related to the social environment of the child or if the child is dyslexic probably caused by deficits in the brain (i.e. hereditary, genetic etc.) as pointed out in Chapter 1.2. The task may be daunting at first

because children may have these deficits due to different reasons such relating to social background and dyslexia. Peer/Reid have come up with points which may help teachers identify dyslexia:

- Reading – the most common identifiers are hesitating over words, missing out on words, semantic errors, leaving out word endings and small words, difficulty with polysyllabic words, confusing the shapes of letters, confusing words that are visually similar, mistakes in the use of tense, grammatical difficulties.
- Spelling – spelling words phonetically, omitting parts of the word, problems with spelling irregular and common words, bizarre spelling, letters or syllables out of sequence.
- Memory – difficulty in remembering instructions, difficulty in remembering numbers in sequence, difficulty doing two or more tasks at same time especially when distracted, difficulty remembering facts and dates, appointments, requirement of cues to remember things, use of unusual memory aids for appointments and/or dates.
- Writing – difficulty in copying from the board, inconsistent handwriting style and reluctance to write.
- Organisation – difficulty in organising homework and workload, poor organisation of notes, bad organization of new facts in relation to previous learning.
- Sequencing – ordering information incorrectly, ‘jumbling up’ the sequence of words letters and numbers, days and months of the year may be difficult to order in sequence.
- Difficulty following instructions – difficulty with more than one instruction and carrying them out in the right sequence. (Peer/Reid 2003, 22p.)

For Peer/Reids just mentioned pre-organiser for the next few pages, examples of mistakes in reading as concerns dyslexics could look as follows:

- Semantic mistakes - such as mistaking ‘shoe’ for ‘slipper’ or ‘bicycle’ for ‘moped’. Here the dyslexic has a problem in recognizing the subtype of a group. The root-group would be ‘clothes’ and ‘vehicles’ The dyslexic can

recognize the group but cannot branch out further or may have difficulty with certain words.

- Missing off word endings - such as 'he see' instead of 'he sees', or 'bag' instead of 'bags' in the plural. The dyslexic fails to inflect the conjugation of the word or is not able to form the plural. Interestingly enough in certain dialects and variations of English, spoken language endings such as those explained are left out. This can be accounted for in African American varieties of English and/or in working class dialects in the UK and Ireland, from which we know that illiteracy is/was very high.²⁴
- Problem with small words – 'for' and 'of' for example are confused such as in 'care of' instead of 'care for' which can semantically and pragmatically change the sentence or in this case would not make sense in context at all. These words in preposition form are also left out, so the pupil would read 'he takes care others' instead of 'he takes care of others'.
- Polysyllabic words – words such as 'disability' would be pronounced 'disility' or 'disatiliby'.
- Confusing shapes of letters – letters with mirror-images would be mixed up such as 'w' for 'm' or 'u' for 'n'.
- Visually similar words – words that are symmetrical may be confused by dyslexics such as 'raw' and 'war' or 'nap' and 'pan'.
- Use of tense – Irregular and confusing analysis of tenses. A text that consistently uses the past tense may suddenly at some point be misinterpreted. The dyslexic would at certain points switch tenses because of a particular verb that looks similar in past and present as for example 'ate' and 'eat'. The mistakes are made sporadically.
- Grammar – mistakes in conjugation and declension could cause reading problems as far as syntax, semantics and pragmatics are concerned. (Peer/Reid 2003, 22p.)

From this analysis we can say that not only do reading problems have an effect on the meaning of each word identified wrong but on a larger scale change the

²⁴ I have not commented further or made research on these similarities so as not to drift away from the topic of dyslexia. I have included it for the value of interest alone, which can be investigated in studies concerning the variations and dialects of English.

meaning of a sentence or even the coherence and cohesion of a whole paragraph or text. It is thus important that the EFL teacher listens very carefully when dyslexics read aloud in class, analyzing where the problems occur and how often. On the other hand it would be de-motivating for the learner if every mistake were pinpointed during reading. Thus, the teacher should note down which mistakes occur most and point out mistakes and solutions after class so as not to de-motivate the pupil in front of class mates. Just as with reading, many problems can be found in dyslexic's spelling as in the following examples:

- Literal phonetic transcribing – the dyslexic may encode phonemic sounds to letters literally in places where there is a difference thus writing 'elefant' instead of 'elephant'.
- Omitting parts of words – parts of words are left out especially with polysyllabic or difficult words such as 'thou' for 'though' or 'accidental' for 'accidentally'. The meaning of the words would change grammatically and/or semantically.
- Difficulty with certain endings – problems with endings 'er'/'or'/'ar' would lead to spelling mistakes such as 'pretendor' instead of 'pretender' or 'losar' instead of 'loser'.
- Spelling inconsistency – words used often in a text will be spelt wrong. In this case there would be a wide range of possible words, but one can assume that problems will occur when using words that are written down differently than they phonetically sound. An example would be 'borough' which could end up being spelt 'burough' or 'borogh'. Dyslexics could have problems keeping the spelling of words consistent in words ending in 'gh' due to the different phonetic differences i.e. 'tough', 'though', 'Slough', 'borough' and 'through'. They could write these as 'tuff', 'thow', 'Slow', 'borogh' and 'threw' respectively.
- Spelling in common and irregular words – I would say most of the common words are irregular in declination and conjugation because they are the oldest in use and have thus diachronically gone through the most changes. Examples would be the verb 'to be' or 'to have'. Common words

that are of Germanic or Celtic origin such as 'door' and 'window'²⁵ are often spelt wrong.

- Sounds 's' and 'z' – Dyslexics may spell 'hose' as 'hoze' or 'dizzy' as 'dissy'. Here as with many decoding problems the sounds are transcribed phonetically.
- Bizarre words – These may crop up because of an extreme lack of concentration or correct processing in the brain. The pupil has no idea of encoding the sound in his/her head to written word.
- Letters or syllables out of sequence – here we have a problem in chronological processing of a cluster of phonemes into the equivalent chronological letter sequence. A word such as 'chronological' may be spelt 'chrolonogical' or 'ambiguity' as 'ambugiuty'. (Peer/Reid 2003, 23)

As opposed to reading, the EFL teacher can plan time for looking into written texts by dyslexics, exactly analysing what types of spelling problems arise, in which context they appear and how frequently the mistakes are made. Accordingly, the teacher should then be able to mark and correct the texts bearing in mind to point out the mistakes and discuss these with the pupil, using the theory of meta-cognition so that the dyslexic learns to reflect on his/her own mistakes and develops the habit of avoiding them. As with reading, the teacher should not only criticize the mistakes, but should motivate by discussing the positive aspects of the text too. The teacher should know the characteristics of dyslexia in reading and in spelling and should be aware of the fact that each dyslexic is individual and should be treated in this way. Each dyslexic will have his/her own individual weaknesses, be it in reading or spelling, to which the EFL teacher has to pay attention, each pupil separately.

Problems put forward can fluctuate greatly depending on which part of the syllabus is being pursued and how external factors implement themselves on the dyslexic pupil. Moreover, the relationship between pupil and teacher may also have an effect on which of the above listed discrepancies arise. For example, pupils may tend to be nervous with teachers that are more strict which may result in more reading and writing mistakes. If the teacher is not able to

²⁵ See <http://www.etymonline.com/index.php>

motivate enough, problems in concentration and daydreaming could arise. It should therefore be up to the teacher to motivate and control classroom activities, bearing in mind that sensitivity towards children with deficits is crucial as far as the relationship teacher-pupil is concerned. The teacher should also be able to reflect on his/her own actions, thus the importance of meta-cognition for both the dyslexic and the teacher, where an adequate amount of knowledge and observation of the pupil has to be implemented. Peer/Reid (2003, 24pp.) have raised important points for observation which can be contextualized for all subjects including EFL namely:

- Attention – how long can the pupil pay attention, how can the teacher best get the attention of the pupil, what distracts the pupil, and which learning conditions/strategies optimize attention.
- Organisation – what organisational preferences do the pupils have and to what degree, how is the pupil organised in reference to work, desk and self, how he/she feels about organisation.
- Sequencing – how the pupil follows instructions and how to help the pupil to do this if needed, how to help the dyslexic sequence pictures, diagrams, words and letters in reading and spelling.
- Interaction – how pupils interact with peers and adults, if pupils prefer one-to-one, small group or class interaction, how to keep dyslexics in interaction by keeping them talking.
- Language – how language is expressed, how accurately meaning is conveyed and is it being conveyed, is language spontaneous or prompted, are breaks in language used correctly, how is language used in different situations i.e. one-to-one, small group or whole class activities, how do errors and omissions occur in conversation and answers and how does the dyslexic deal with correcting mispronunciations and tasks to be repeated.
- Comprehension – how the child understands information, what cues ease understanding, does the dyslexic have a concept of what he/she is learning, what types of instructions make the child understand best – oral, written or visual, can the knowledge be used in other areas after or while being learnt.

- Reading – does the child prefer reading aloud or silently, what types of mistakes are made.
- Visual – mixing up letters that look similar as in ‘c’ and ‘e’ , knowing the difference between ‘small’ and ‘capital’ letters such as ‘g’ and ‘G’, leaving out or switching parts of a word such as ‘luckly’ or ‘luckyli’ instead of ‘luckily’, a sign of segmentation problems.
- Auditory – unable to hear differences, unable to hear consonants in initial, medial or final positions of a word, problems with auditory sequencing, blending and segmentation.
- Motivation – how is the interest of the pupil, how can motivation be increased and how should the child be prompted or cued, how responsible is the child at its own learning, what external help is required for learning.
- Self-confidence - what tasks are the pupils best at, and when is confidence low and in what context.
- Relaxation – When is the child relaxed and when is it tense, is it more tense than relaxed or vice versa and why.
- Learning preferences – It is important to observe what learning preferences the dyslexic has i.e. auditory, visual, oral, kinaesthetic (learning by carrying out a physical activity)²⁶, tactile (using the sense of touch to learn)²⁷, global (learning by dialogues)²⁸ or analytic. (Peer/Reid 2003, 24pp.)

So what are we to make of so much information at once? Will teachers be able to use all these points for observation? Is the teacher capable of using this list when teaching or having dyslexics in class among ‘normal’ children? Is this list too exaggerated for use in the classroom? Will a ‘to-do list’ containing all of these items have an effect on the individual pupil-teacher relationship?

One could argue that in reality using all these points would be too much to expect from teachers who have to concentrate on and observe the other children in the classroom as well which may be as many as 20 to 30 at once in

²⁶ See http://en.wikipedia.org/wiki/Kinesthetic_learning

²⁷ See http://www.trcc.commnet.edu/Ed_Resources/TASC/Training/Tactile_Learning.htm

²⁸ See <http://www.globalearning.com/approach.htm>

the short time given for a lesson, say 40-45 minutes. Moreover, teacher observation also applies to non-dyslexic children since some are bound to have problems with reading and writing depending on their talents and social background. Pinpointing every mistake is indeed counterproductive and is not possible in the short time given for a lesson with so many children, if the teacher wants to complete the lesson plan.

Still special attention should be given to dyslexics as soon as discrepancies with reading and spelling become habitual. It is then the role of the teacher to find out which habits reoccur, how to help the pupil by observing the obvious mistakes and habits of the pupil, and then act accordingly. It may also be of help to integrate the 'majority' into special learning methods such as kinaesthetic or tactile²⁹ which, under normal circumstances is not used often in the classroom, but may be fun for the class and may boost the confidence of the dyslexic as well. It will certainly make the classroom more colourful for the children, who would then be thankful for having a dyslexic in class. This could motivate the dyslexic further. As the saying goes: 'good news spreads'.

Nevertheless, on a broader level the following points according to Peer/Reid should be the parameters of learning context. First of all is the importance of how the classroom is organised. This includes lighting, sound, activity in class, and if the classroom is organised for more than one-to-one tasks. Second is the role of the teacher as to how he/she teaches (auditory), how he/she structures the lesson. Next would be to ask whether the child understands the task given, if he/she can follow the sequence of the task, and if group work can be used in conjunction with the task. Last point to mention is that of materials/resources. How difficult are the materials handed out by the teacher for reading, and does the teacher give enough responsibility to the pupil for learning in connection with selecting resources. (Peer/Reid 2003, 27)

To follow up, a holistic approach has to be undertaken to see where the weaknesses and strengths in the dyslexic's learning capability from subject to subject vary, by observing components within different frameworks of learning,

²⁹ These will be discussed in Chapter 4.1 under Learning Styles.

observing some factors within that framework associated with specific dyslexia, observing preferred styles of learning and acknowledging the importance of the learning context. (Peer/Reid 2003, 27)

Moreover, Peer/Reid broaden the observational criteria by referring to the Interactive Observational Style Identification (IOSI), a framework for collecting observational data on learning styles developed by Given/Reid³⁰. These are based on the emotional, social, cognitive, physical and reflective behaviour of the child:

- Emotional – what topics and activities can motivate the child, what must be done to increase the motivation of the child, how responsible is the child for the actions it takes and how does it behave towards its fellow-pupils, how organised is the child and how is its reaction to organisational structure being opposed unto him/her.
- Social – does the child achieve best when working alone with one other or in group tasks, does the dyslexic seek approval or does the teacher have to check more frequently, is the child disruptive.
- Cognitive – does the child understand better through visual, written or oral instructions, does the dyslexic react easier and quicker to stories read or heard, does the child have problems with sequential information and can he/she order his/her thoughts in logical sequence, is the dyslexic spontaneous or delayed in reflecting.
- Physical – is the child relaxed or fidgety during the lesson, does the child prefer to stand and walk when learning something new, which part of the day is the child most attentive and better at learning, does the child chew on something when learning.
- Reflection – Does the child choose places that are noisier than quiet, does the child work better in more well-lit or darker areas, is the child dressed too warmly or does it wear too little, does the child prefer to sit on a chair or on the floor or lie down if given the choice, does the child reflect on its learning capabilities by asking itself questions about what, how and why it

³⁰ See Given, B.K. and Reid.G. (1999) 'The interactive observation style identification', in Given, B.K. and Reid.G. Learning Styles: A guide for teachers and parents. St Anne's on Sea: Red Rose Publications.

has learnt, does the child aim for goals or let things happen as they come, how does the child react to feedback, and how much help does the child need to remember and repeat material already learn in the past. (Peer/Reid 2003, 49pp.)

These are all observational methods meant for the diagnosis of dyslexia. Here is much information that cannot be used by the EFL teacher all at once. This means teachers should not only observe how the child behaves in class, but should also ask what preferences and habits the pupil has at school and at home, evaluating information on his/her social surroundings and the relationship to peers and other teachers (in as far as what kind of teacher type does the child prefer for which subject and topics in class).

So from Peer/Reids attempt for a diagnosis of dyslexia in the classroom we can draw the following conclusion that there are five observational processes in identifying dyslexia, namely:

- Observe reading, spelling, memory and writing problems, where one would have to look at the former two in closer detail to guarantee success in the latter two if the child had discrepancies in reading and spelling.
- Observe the habits of the pupil as far as the following are concerned: attention, organisation, sequencing, interaction, language, comprehension, reading, visual skills, auditory skills, motivation, self-confidence, relaxation, and learning differences.
- Observe learning in parameters of learning context which include classroom organisation, role of the teacher, quality and quantity of tasks set, and materials and resources used.
- Observe holistically the framework of the three already mentioned points, which factors there are, which learning styles³¹ are preferred and how this all fits into the context of learning.
- Observe using the IOSI model framework of Given/Reid on learning styles which include emotional, social, cognitive, physical and reflective aspects.

³¹ See Chapter 4.1.

The next approach to identifying dyslexia in the classroom would be to find out if a child has visual difficulties. This could be done by using screening procedures which do not always show if a child has dyslexic-related deficits in visualising (Mailley 2002, 40p.), since the problems in visualising written texts may be stress-related. Of course such methods such as school eye tests and vision tests by opticians will not suffice, since on the one hand they only relate to the functioning of the eye, and on the other hand visualisation may be impaired due to social and nutritional factors. For assisting teachers, the following points should be asked:

- Which tests have been carried out and where?
- How should one understand test procedures a pupil has undergone, or is likely to undergo?
- What tests are available and at what ages might these be administered and by whom?
- What are those tests designed to show?
- Which specialist personnel should assist?
- Which referral procedures are required? (Mailley 2002, 41)

Mailley stresses the quality of the requirements to guarantee a proper testing procedure. If screening procedures were to be used, one could look for deficits in two different categories:

Perceiving letters – Here one would examine the way in which the child perceives the letters as they seem to appear on the page, which can move in numerous ways. This can be very exhausting for the reader who has to make more effort or may in worst cases not be able to read at all. Effects to the eyes could be blurring, letters swirling or flickering, words squashing up or spreading out, or print running off the page or simply disappearing.

Physical problems – This refers to the negative physical effects of someone who is faced with printed texts. The symptoms are dizziness, nausea, migraines

and headaches, tiredness, and eyes that itch or sting, water or hurt. (Mailley 2002, 42)

The symptoms of physical problems can certainly be analyzed better by the specialist testing the pupil as opposed to the problem with perceiving letters, about which only the child can give information.

In class other indicators should be observed and identified as visual difficulties by teachers. These indicators which Mailley lists can be broken down in pointers that can be directly seen and those that are indirect. The direct observations would include:

- skipping words or lines when reading,
- using a marker or a finger to keep place on the page,
- working very close to the page,
- reading very slowly, using a jerky rhythm, hesitating,
- losing place on the page,
- repeating words or lines when reading, and
- moving the head instead of using eye movement in order to keep their place while reading.

Indirect ones would be:

- experiencing difficulty with working from the blackboard (this may not be noticed at first by the teacher who would be concentrating on writing with his/her back turned towards the children),
- losing concentration, being distracted easily (may not be noticed by the teacher since the teacher may only relate the behaviour to psychosocial problems),
- sitting awkwardly, curling up over work (the teacher may relate this to individual habits of the child), and
- being sensitive to light (the teacher may relate this to some genetic disorder of the eyes).

Other factors may include inadequate background accommodation, poor print resolution, restricted span of recognition, and lack of sustained attention (Mailley 2002, 42p.)

So for teachers, parents and pupils it is important to understand that visual difficulties affect learning, not only in simple word recognition but also in other more advanced skills such as proof reading, skimming and speed reading. It would thus be important for teachers to be equipped with the knowledge of how to recognize reading disabilities by observing patterns and behaviour of the child. It would be of great benefit to them to visit professional development courses and dedicate some time to constructive work between teachers and doctors or other teaching and medical professionals. Mailley suggests certain measures be divided into two groups which can help to solve these problems. The first concern the measures that change the working environment:

- change the amount of light in the classroom,
- make sure the pupils get as much natural daylight as possible when reading,
- use light bulbs with faster flicker rates,
- position the pupil where he/she can read better (i.e. near the blackboard or away from/near to strong light, depending on the child's preferences)
- allow use of coloured lenses or overlays,
- use of double-spacing and/or larger font sizes,
- avoid strong contrast between background and print, and
- use of reading masks that cover distracting print. (Mailley 2002, 46p.)

The second group concerns measures that help create a profile of each student such as:

- use medical questionnaires to identify pupils at risk,
- keep a close record of pupils' strategies,
- discussing possible problems with pupils and noting down their statements, and
- revise old test results and change the tests accordingly. (Mailley 2002, 47)

EFL teachers have a difficult task, since they are not the policy makers. Nevertheless it should be in their interest and that of the children to see that policy makers adapt the curriculum to the need of those with reading and writing deficits. Were this to be taken care of, then the EFL teacher could identify dyslexics within the classroom, introduce problem-solving concepts and intervene using the correct strategies. They would judge and mark dyslexics' work fairly and use research and materials to help them come to terms with the latest teaching methods. Above all, if dyslexics are to stand a chance of finishing school to enter higher education, they as well as the teachers should be motivated into doing so. Without motivation all the work and money invested into integrating dyslexics into the normal school system would be to no avail. Therefore, the first step would be to analyse how teachers could motivate reluctant readers which would be easier than motivating them to write because the reading process 'only' deals with given material as opposed to writing which deals with producing texts. Once a way has been found to motivate readers, one could follow on and find ways of motivating writing.

3.4 Motivating the reluctant reader: the Hunter-Carsch 'nine steps' illustration.

In order to motivate the pupil to read there are nine steps that Hunter-Carsch³² uses to illustrate a motivational success. Within these nine steps the teacher has to go through a process of answering three questions that stand under the headings 'How motivated is the learner?', 'what is it attitudes, feelings?', and 'how close is the learner to doing what successful readers do?'. The three questions in this order stand in correlation with progressing steps to success:

- Step 1: Why do they seem to lack motivation to read? – Why are they reluctant? – Can they read? (can't, won't, don't?)
- Step 2: What do they read? – Who/what is it about? – How do they do it?

³² For Hunter-Carschs model, see Table 1.1 in Hunter-Carsch, 23.

- Step 3: Not only printed texts – Images, identity – becoming and being.
- Step 4: Social-interactive model of reading – Role model: learner/teacher – competent, automatic.
- Step 5: Purposes for reading texts – Creating text, de-centring, centring and deep centring – Mastery of ‘Phonics 44’.
- Step 6: Recognizing – Learning preferences – Learning difficulties (e.g. dyslexia).
- Step 7: Self-advocacy – self-confidence – literacy.
- Step 8: Love of language – love of learning – communication.
- Step 9: Meta-linguistics – Meta-affectivity – meta-cognition (Hunter-Carsch 2002, 23pp.)

What do all these phrases have in common? They all deal with the psychosocial problems of reading and the relationship between teacher and pupil, not only what the teacher’s objective must encompass, but also how the pupil is situated in relation to the teacher’s own reflections and actions. The first phrase (e.g. meta-linguistics) refers to the action required in order to motivate the reader, the second (e.g. meta-affectivity) refers to the attitudes and feelings that concern the links to becoming a voluntary reader and writer, and the third (e.g. meta-cognition) refers to what successful readers do. Looking at the nine different stages to master reading, we note in chronological order:

The first step refers to questions that are hidden in headings already stated, which have been taken out to refer precisely to the problem of reading and the connection between looking at the action required and the success of reading itself.

The second step refers to finding a starting point for readers, how and why they are in the situation they are as concerns reading, and to find out what experience with reading the pupils have.

The third step has words that refer to the willingness for learning and the idealism to be willing to carry out the process of reading, thus how to get the pupil to be a part of what it is reading in a subconscious way.

The fourth step implies the relationship between learner and teacher and what the teacher thinks is the right way for motivating the pupil to read so that he/she is competent enough to reach automaticity and understand the text.

The fifth step refers to the fact that there must be a purpose to reading so that motivation can take place. If the purpose for reading the texts is not clear to readers or the motivational reasons are not acceptable for readers, then the problems may be solved by moving away from pre-printed texts to texts that are created by the readers themselves. These can be creative texts that require de-centring where the writer is the observer or storyteller, centring where the writer is 'just there' or deep centring where the writer moves deeper into feelings. To be able to do this the writer has to be able to convert phonemes to graphemes to be able to write or 'encode' on paper. This process is known as 'Phonics 44'³³, referring to the approximately 44 phonic sounds of the English language.

The sixth step refers to the conscious level where the readers are what they are and should be treated according to their reading capabilities and interests. This requires tolerance and understanding from the teacher who sets realistic goals for the pupils especially those with reading and spelling deficits as with dyslexics. They must have the feeling that they are accepted the way they are and that they are in control of their learning. The skills they need for this are pointed out next.

The seventh step refers to the social barriers that pupils may be confronted with. Due to their social background there may be barriers in showing interest towards ideas of parents and in this case, teachers. This is especially the case with adolescents who are socially dependent on peer group views that may not coincide with that of the adults. One-to-one teaching of a peer or an older pupil may be acceptable. Once the needs have been recognized, the pupil's confidence should boost and he/she can develop independently to reach the goal of reading voluntarily.

³³ See <http://www.atozphonics.com/phonicsounds.html>

The eighth step refers to the factors that are needed to keep voluntary reading and motivation going in the right direction. The love of language with all its aspects as reading, speaking, and writing, is communicated through the love of learning.

The ninth and final step refers to the range of ideas throughout the main elements that is language as a concept for negotiating our concepts (meta-linguistics) by awareness of the feelings that are experienced (meta-affectivity) and the thinking about thinking that is needed to develop these concepts and ideas (meta-cognition), to reflect and improve things which is important for dyslexics and others with spelling and reading deficits³⁴. (Hunter-Carsch 2002, 23pp.)

From this very dense model we can assume that the psychosocial background of the dyslexic can have a tremendous influence on motivation and integration in the classroom. As already discussed in Chapter 2 the main problem lies in the successful 'connection' or 'relationship' between teacher and pupil. Hunter-Carsch correctly points out the problem of the 'speaking out in class' taboo, the unwillingness to learn because of peer pressure which can especially be brought in association with adolescents. It must be up to the teacher to break these barriers by finding the correct solution by for example allowing dyslexics to work with older pupils or creating one-to-one tutoring. But, as already discussed in Chapter 2, not all children that have reading and spelling problems are dyslexic. Hunter-Carsch mentions the word 'dyslexia' only once in the model, taking this fact into account. More often than not the problems concerning reading problems can have their 'routes' in the dysfunction of the social environment of the child. Therefore the teacher has the responsibility of identifying whether a pupil is dyslexic or not.

Finding the reasons for reading disability among children is not easy since, as already pointed out, many factors can be involved making it somewhat more difficult for teachers to identify dyslexia among those who have it. Teacher training and continuous education on the pedagogic field should be an

³⁴ See Chapters 4.2 and 4.3 on meta-cognition, meta-linguistics and mnemonic concepts.

obligatory requirement for those wishing to become or stay as educators at schools since research made in this direction would have positive effects on developing methods and skills in identifying dyslexics.

Given the problems and challenges of teaching dyslexics the approaches to teaching and classroom management have to be solved so that such minorities have a chance of a proper education and of receiving higher education. We look in Chapter 4 at learning styles and methods that can help dyslexics overcome their learning problems, namely meta-cognition, meta-linguistics, mnemonic devices and other methods such as ICT in and out of the classroom.

Chapter 4 Dyslexia and EFL – Teaching methods and support in and out of the classroom.

In the previous chapters we have discussed how to define and identify dyslexia in the EFL classroom not only on a general basis but also within the framework of pupil/teacher, pupil/environment and pupil/classroom relationships, focussing on definitions, contexts, and problems of dyslexia in relation to EFL teaching and learning. Now we move on to discuss how EFL teachers can successfully teach dyslexics, and how they, the dyslexics, can be ‘trimmed’ into becoming successful learners. This will be done by introducing the different learning styles, pointing out which may work with dyslexics and which may not. Hence the methods of meta-cognition/meta-linguistics will be discussed followed by the resulting mnemonic devices. Towards the end, the chapter on technology to help dyslexics in and out of the EFL classroom will illustrate that teaching methods reach out further than the classroom, opening up more opportunities for dyslexics and teachers and EFL learning.

4.1 Learning styles and dyslexia.

Learning styles are different ways or approaches to learning, which are important when trying to find out how pupils learn best in the EFL classroom. Teachers can use a variety of approaches to guarantee successful learning, but not all learning styles suit each pupil. With dyslexia this is more of a problem since the number of learning styles that can be used is limited because of reading and spelling deficits. Since there are more than 80 different learning styles³⁵ or learning style combinations, it would suffice to briefly look at the most common ones with regard to dyslexia namely visual, auditory and tactile/kinaesthetic, these all using vision, hearing and touch/movement respectively.

³⁵ See http://en.wikipedia.org/wiki/Learning_styles

The visual learning style is used by pupils who learn by seeing. They learn best by absorbing information from pictures, overhead projectors, anything presented visually through technology such as TV or computer and written work such as handouts. They observe the gestures and movements of their teacher which helps them to comprehend information better. The dyslexic, as we have already discussed, has a problem of visualising texts since he/she finds it difficult to decode sounds to letters, and will thus find it harder than non-dyslexics to visualise texts i.e. read. Moreover, he/she may also find it harder to bring down to paper what he/she perceives through television, pictures or visual clues given by the teachers due to deficits in spelling. This has nothing to do with bad imagination or with the fact that the dyslexic cannot see and interpret what it sees into sounds; he/she has difficulties to convert sounds into letters.

The auditory learning style is used by pupils who learn by hearing. They learn best when being able to listen to and absorb information from monologues and dialogues, group discussions and listening to radio and/or other audio devices. They read texts out aloud in order to learn by hearing themselves because they can make better sense of information when heard rather than visualised. Since dyslexics have deficits in reading, this learning style may not be as successful because he/she has problems in deciphering the letters and words on paper and so cannot hear them. The pupils may not be able to write down what they hear from the teacher, from discussions or from audio devices such as CD or radio because they have problems in converting sounds to letters, words and sentences thus having bad phonological awareness.

The tactile/kinaesthetic learning style is used by pupils who learn by physical movement and the sense of touch. They use their hands and fingers to learn, an example being learning the letter 'A' by feeling a cut out shape that resembles the shape of the letter. Children better at this learning style are restless because they learn as they carry out the action. For example, instead of reading about how to do yoga or how to play football, they carry out the movement or try the position by using parts of the body as 'learning by doing' rather than reading about it or listening to how it is done. This should not pose

problems for dyslexics since there is hardly or no reading or spelling involved in this learning style.

Since dyslexics will have problems in either visual or auditory learning styles, or both, due to their problems in phonological awareness and decoding letters, words and texts, they will have to rely on all their senses to cope with the deficits. Thus the multi-sensory strategy is used, which calls for visual, auditory and tactile/kinaesthetic styles. The dyslexic should be given the opportunity to use all senses if he/she wants to and may build self-confidence using the strongest style.³⁶ Thus, teaching dyslexics should include as many teaching styles as possible, using the stronger styles as well as encouraging the weaker ones. The teacher should make the pupil aware of which learning style he/she is using and which ones he/she is good at. Thus, the dyslexic can not only reflect on the learning styles but also on what he/she is learning.

4.2 Meta-cognition/Meta-linguistics – how to teach EFL to dyslexics according to Schneider/Crombie.

The word ‘meta-cognition’ comes from the Ancient Greek ‘meta’ which means ‘about’ and from the root ‘cogni’ which means ‘knowing’ or ‘thinking’, or ‘knowledge’ or ‘thought’. (Schneider/Crombie 2003, 23). So it means the realisation of learning, or the knowledge of knowing. With this method the teacher aims to compensate dyslexics’ lack of short term memory through identifying language patterns. Due to the adding of meta-cognitive teaching strategies to the EFL classroom, the pupils have the feeling of being more successful and thus their motivation rises.

Using this concept teachers can teach dyslexics to become aware of how and why they are learning material in certain patterns moving in a wrong direction, or show the pupils how patterns work and how to remember these patterns for other scenarios, since language learning means following a string of patterns such as memorising declensions and conjugations, word endings, coherence

³⁶ See <http://www.countmein.org.uk/explanations/learningstyles>

and cohesion of texts, and sequencing word order in sentences etc. It is a concept for dyslexics to improve on solving automaticity and memorising in EFL learning.

Schneider/Crombie hypothesize that there are four skills that pupils have to be in command of to successfully complete the meta-cognitive and meta-linguistic process. To see how meta-cognition and meta-linguistics correlate, two examples from each are used for the process as a didactic suggestion how to teach dyslexics (for the meta-cognitive process our problem will be a mobile telephone that does not work, for the meta-linguistic process our problem is a possible error in conjugating 3rd person singular present indicative active):

- Awareness – The child must be aware of the problem(s) that has/have to be solved.

∅ Meta-cognitive: the problem is a mobile phone that does not work.

∅ Meta-linguistic: a possible error in conjugating a verb in 3rd person singular present indicative active.

- Strategies – The child must show that it can come up with various strategies to solve the problems.

∅ Meta-cognitive: the child has the options of checking if the battery has to be recharged and then recharge it, see if there is a software problem and accordingly make a software update from the internet, see if the SIM-card is damaged and take the mobile to the mobile provider to get a new one, see if the mobile has an internal defect and take it for repair to the mobile manufacturer, sell it if not wanted anymore or throw it away and buy a new one.

∅ Meta-linguistic: pay no attention to the fact that the word could be wrong, ask the teacher for the right answer, ask the classmate for the right answer, look up the answer in a grammar book, check the use of conjugation in other texts to find the mistake that way, use the internet, mark the word and come back to it later.

- Action – The most appropriate strategy must be implemented so as to solve the problem as effectively and as quickly as possible.
 - ∅ Meta-cognitive: Being near a mobile provider shop makes the choice different than being near the shop of the mobile manufacturer or at home.
 - ∅ Meta-linguistic: Fixing the ending of a verb in class during a test is much harder than sitting at home in front of the internet with someone who understands more about verb endings of the English language.

- Assurance – How the child knows that he/she has made the right choice by carrying out a control procedure after the strategy has been carried out. If the problem is solved, the strategy was correct. If not, then another strategy should be selected with the repetition of strategies, action and assurance.
 - ∅ Meta-cognitive: The child should be convinced that the mobile phone works after it has been taken to the provider and a new SIM-card has been inserted. The mobile should function exactly as it did before the problems started.
 - ∅ Meta-linguistic: The child should be convinced that the word is spelt correctly by asking him-/herself if more proof is needed from other sources. (Schneider/Crombie 2003, 24p.)

From this example we can see how clever the idea of meta-cognition works, using everyday scenarios or situations of problems that need solving with a touch of common sense and initiative that can be applied to EFL classroom situations as well. The steps only work if they are kept in this chronological order. The dyslexic will certainly find it easier to locate mistakes and correct them using a method that can be applied to everyday situations as well with reading and spelling deficits. Since they can master such problems in normal every matters such as mobile phones, it will give them the confidence to apply

exactly the same procedure of solving the matter with their deficits in class. This solves the question of the pupil. What about the teacher?

Improvising on ideas from Schneider/Crombie I have developed points showing the EFL teacher's role in taking care of meta-linguistic skills as well as points showing the EFL pupil's role which should ensure a successful meta-linguistic EFL teaching/learning follow-up. Here is the points for the teacher's role:

The first point is knowledge. The teacher should know that meta-linguistic strategies can be used by all learners, and can help them learn at a faster pace, whether dyslexic or not. Meta-linguistic strategies are most helpful for dyslexics because without meta-cognition, dyslexics would find it harder to follow learning patterns and would not solve their short memory problem despite motivation. Through multi-sensory ways the pupils can learn how to compensate for their auditory and/or visual deficits by using their strengths.

The second point is preparation. The teacher can use meta-linguistic strategies with EFL textbooks, from which the teacher can also create additional materials to help dyslexics during tests and normal classroom teaching, making sure the pupil reflects aloud on the processes he/she is working on which may suggest analysing ending of words or conjugating verbs. Moreover, different colour or shape-coded card sets can be used to present different concepts in vocabulary, grammar, pronunciation and syntax and so on with the use of water-soluble markers.

The third point is tools. With the use of different colours and corrections, the pupil has to verbalise what he/she is writing. With this the dyslexic can learn in a meta-cognitive way. Through colour and shape-coding, they learn in a structured way and are stimulated through the materials to carry out tasks meta-linguistically with teacher and/or classmates. The teacher can vary the use of colours and shape-coding according to the competence of the EFL learner to differentiate between difficulty levels.

The fourth point is communication. The teacher uses the prior knowledge of the dyslexic to arouse his/her interest by provoking the child to think and by non-verbal gestures. For success the teacher should not give away the answer until it is certain that the pupil does not have prior knowledge on what is being asked. It is thus important that the teacher knows in advance what the pupil should already know, which can be found out by provoking questions, using gestures and using the colour codes with shaped cards on vocabulary, grammar, and pronunciation or spelling. The teacher can use objects or actions that can help the pupil to relate to linguistic information such as pronouncing the letter 'H' by fogging a mirror or using a stuffed toy dog for the word 'dog'. Furthermore, teachers could motivate the pupils to verbalise answers by asking questions, or by putting them in a detective position to find out for themselves by for example asking 'can you detect why an 's' comes at the end of this word in this part of the sentence'. The teacher should use supportive language or encourage children to carry on with their good work, and let the pupil repeat what it has meta-linguistically achieved. In early stages it would be important to use more L1 with the dyslexic so as not to make him/her too insecure when starting to learn something new. As they improve, the teacher can gradually use more and more phrases and termini in the FL, in our case in EFL.

The fifth and last point is sensitiveness. The teacher should be able to guarantee a positive peaceful atmosphere for the children to learn in. This would help them to develop their skills better, give them more courage in speaking out in class with meta-linguistic thinking and help them achieve better results in their tasks. The teacher will ask questions on the topic that helps the pupils to think for themselves, how to discover and correct their mistakes using gestures and multi-sensory structured strategies and materials (as in tapping syllables). For longer sentences or texts it would be useful to use the card and colouring system to mark the difference parts of the FL with different colours such as parts of speech or different grammatical functions. The teacher should practise patience with the children and let them rethink or reread their efforts to ensure they have done their tasks as well as possible. The pupil must not be afraid of making mistakes; the teacher should point out that making mistakes is important as it is one way of learning: where there are mistakes, there is room

for positive improvement. The teacher should encourage the students to ask each other and the teacher questions which helps to reflect and learn. Negative comments alone should not be used since it can be discouraging and counterproductive; if such comments are made as 'I think your idea of ending the text was not so good', then it will help to add something positive to it such as 'but I thought the start was excellent, which may help you to improve the ending'. (Schneider/Crombie 2003, 25pp.)

Without preparation, the teacher would possibly use the wrong tools for the wrong exercises i.e. not know how and when to use colour codes and shaped cards. In turn, using the wrong tools would result in wrong communication, in a sense that either the message to the pupil is wrong because of the wrong use of the tools, or the pupil receives the right information but is insecure about developing the methods since the teacher is not able to motivate and focus on the child because he/she is not adequately prepared. Hence sensitiveness is of great relevance. It may seem too much for a teacher to fulfil all the points listed above for him/herself when planning a lesson and it is not the point to plan the 'perfect' lesson or to act as the 'perfect' teacher or expect the children to act with 'perfect' meta-linguistic methods. The idea is to help the teacher to make the most out of time, talent and knowledge. Depending on the pupils and the level of materials and outer/external factors such as syllabus, influence of policy makers or social background of the pupil, the teacher can choose how to prepare for the class by arranging the right tools, plan how he/she will deal with the children knowing their meta-cognitive potentials and weaknesses, their behaviour as individuals and the behaviour and atmosphere in class, find the correct balance of motivation and sensitiveness to balance the class bearing in mind there are stronger learners and those that are weaker at reading and spelling such as dyslexics.

Moreover, there cannot be the one side without the other so there is also a role for the pupil. Adding to the points of the teacher I have devised other points improvising on Schneider/Crombie which show which responsibilities and actions the pupil has to face to make the meta-linguistic learning process work:

The first point is attention. The pupil's attention is of utmost importance. Since dyslexics may be daydreamers, their mind meandering away from classroom activities, they, especially, should pay attention to the teacher's language and gestures.

The second point is communication. For reflection and other learning purposes it is important that the pupil talks to the teacher in class especially if he/she does not understand something. Before sitting on a mistake, he/she should ask just for the sake of reassuring.

The third point is practice. The strategies formed by the teacher in relation to thinking and problem-solving should be practised by the pupil in and out of the classroom. This should lead to better learning experiences, motivation and more confidence to tackle similar problems, should they turn up again.

The fourth and final point is selection. After some practice the pupil should recognize which memorisations and strategies are best for him/her in which situation. This is a step further after practising. The pupil is moving in a spiral-upwards trend and is helping him/herself even more by not only repeating what the teacher does, but by also reflecting subjectively on what he/she needs how and when. (Schneider/Crombie 2003, 31)

We note the points to be achieved for positive meta-linguistic methods are chronologically ordered. Communication cannot take place if attention is not sustained. Likewise practising will be a problem if there are communication problems between teacher and pupil, so that the pupil does not know what to learn and/or learns wrongly. If practice is not enough then the dyslexic will not be able to find or pick out what is needed for him-/herself, why and when. For the teacher this is likewise.

The centre of the element in both the role of the teacher and that of the pupil is the success in communication between the two. Since both teaching and learning are dependent on a chronological order of events that are vital for success for both actions, communication is the interlinking factor between

teacher and pupil that is most important of all for the meta-cognitive and meta-linguistic approach to make learning successful, but this is not all.

4.3 Mnemonic devices.

Without memory, communication with information from teacher to pupil will not have much effect if the aim of the teacher is to teach the pupil to be able to select learning strategies and patterns on his/her own. Thus, memory is the device which comes into play. To obtain meta-linguistic skills, the dyslexic must rely on his/her memory. The following ideas used by Schneider/Crombie can be used in EFL:

- Sound clues – they help the dyslexic to memorise pronunciation and vocabulary. Here letters are linked or associated to sounds in L1 such as ‘hick up’ where the short ‘i’ and ‘u’ are short and suddenly stopped by the end consonants ‘ck’ and ‘p’ as one feels like when one has a hick up after eating or drinking too quickly, thus onomatopoeic.
- Crazy stories – they help to memorize words with difficult spelling thus non-phonetic words. The student would make up a story adding up to five of these words in it such as the ‘gh’ at the end of words that have phonetically different variants in English: ‘Although he took the bus from Slough to Marlborough, he found it tough to enjoy the journey’.
- Letter-shape clues – they help to memorise and recall spelling patterns and vocabulary. This would mean taking a word such as ‘apt’ where the ‘p’ could be mistaken by the dyslexic for a ‘b’. ‘Apt’ is something that can be related to the brain, top of the body because it means ‘skilled’, and with ‘p’ the head is at the top, as to ‘b’ which is at the bottom, therefore wrong. The pupil would learn to spell ‘apt’ with a ‘p’ relating to ‘top of the body’ in connection with ‘brainy’ or ‘clever’.
- Picture clues – drawings or pictures are made by teacher or pupil to help memorise difficult new vocabulary. Here picture cards can be used to check spelling and reading by finger-tapping syllables heard and apply any

reading strategies if reading makes sense by dividing syllables to check if understood, respectively.

- Acronyms – a word is taken and from each letter of the word a concept is written down to help memorise and recall which can be e.g. note-taking from oral presentation such as the word ‘S.L.A.N.T.’: Sit up, Lean forward, Activate your ‘thinking machine’, Name the key information, Take in information for non-verbal and verbal information.
- Keywords – a keyword sentence can help to memorise and recall syllable patterns or learning steps such as ‘Bi-syllabic, basic words with key sound in initial position, e.g. short A: apple, long A: army.
- Songs and sounds – here a song or a melody can help to memorise and recall pronunciation, vocabulary or grammar.
- Gesture and motion clues – Here gestures or motion signals are used to signify different word meanings, pronunciations or for checking spelling by finger-tapping or word division.
- Personalisations - an abstract concept is personalised with characteristics of a human being, animal, flora or fauna such as ‘English consonants are cool cops. They make sure that the single vowels change their sounds’. (Schneider/Crombie 2003, 32pp)

These mnemonic study strategies should give EFL learners the confidence to excel in meta-cognitive thinking and strategies of correcting and learning. For non-dyslexics explicit interactive learning such as this should be fun. They would not need this to pass the course they are doing, but for dyslexics these would be vital otherwise they would fail. Therefore it is important that the teacher implements meta-cognitive dialogues with the pupil so that he/she can verbalise thinking processes, solve problems and find out where his/her own weaknesses lie and correct those. (Schneider/Crombie 2003, 43)

For success in keeping motivation in EFL teaching and learning high, Schneider/Crombie suggest the following for teachers:

Analyse the content of each unit – EFL books may be organised according to themes that may not fit into the concept of dyslexic learners depending on the presentation of linguistic or grammatical information. Sometimes more complicated structures are taught before easier ones.

Cut each chapter into smaller, logically sequenced units – meta-linguistic understanding is of importance, therefore the teacher should explain how new information connects with previously learnt one. Pace and sequence provide problems for dyslexics, therefore a change in linguistic topic should be explained by taking time and explaining exactly what linguistic patterns follow on in the next unit.

Structure each lesson carefully – The teacher should show the dyslexics how to connect information between the units or make them discover this for themselves. The teacher should move on slowly once the pupil has grasped the ideas by prompting them. Due to the short attention span of dyslexics the concepts should be broken up into smaller units where the dyslexic can use meta-linguistic processing to more success. The teacher should then slowly move from more guided to less guided activities i.e. multi-sensory.

Teach in a multi-sensory way – The use of kinaesthetic/tactile learning may help when the dyslexic cannot memorise a certain concept or differentiation visually or aurally. Then touch-memory or muscle-memory may help to do so. For EFL this type of learning would be useful for pronunciation, sentence structure, vocabulary, spelling, punctuation, writing, differentiating letter sounds according to hard and soft, and speaking grammar.

Teach in a meta-cognitive/meta-linguistic way – The explicit way of processing language concepts should be used as already discussed earlier in the chapter. The interaction between teacher and pupil with mnemonic devices is the aim here.

Provide opportunities for over-learning – this should be taken in the positive sense in that the pupil should repeat learning steps over and over again until he/she has reached automaticity. This should be done using a concept in a

variety of contexts otherwise learning could become boring and the dyslexic will not be able to follow up if the next level of learning involves using a concept in a different context, such as moving from tactile to using coloured cards and markers i.e. paper and pencil tasks. Thus, concepts should be used in varying contexts depending on which are most useful at certain learning points. These can be done alone, in pairs or in groups.

Teach linguistic concepts explicitly – Explicit explanation will have to be used by the teacher since dyslexics cannot understand and properly use the foreign language patterns orally and in writing without it. This has to be given to pronunciation where the pupil must learn which sound requires which spelling, for prefix and suffix patterns in compounds which are important for reading, writing and spelling. Grammatical concepts and socio-pragmatic information about the foreign language regarding typical behavioural attributes in social settings are also important. (Schneider/Crombie 2003, 47pp.)

Schneider /Crombie are right in pointing out that dyslexics need special attention as far lesson planning and teaching methods are concerned. What they forget is that each individual learns at a different pace and is stronger at parts of the syllabus than others. Some dyslexics may be better at reading and spelling than others. Some may be able to memorise longer parts of units than others. Therefore, by observing and assessing, the teacher can decide if the class should be divided using group activities for some and 'learning on one's own for others', some may need one-to-one learning especially if they are shy or nervous of speaking out in class or working with others. On the other hand, the teacher must observe if splitting the class up is constructive so that no one feels left out, is under- or overachieving. This should not be confused with over-learning. The former refers to whether the pupil is learning more or less of what it is capable, and the latter refers to going over material to such a great extent so as to gain automaticity. Important in every respect is how the EFL teacher succeeds in making the dyslexics memorise aspects of the language he/she is learning.

Schneider/Crombie have come up with good ideas in teaching EFL as to how this is built up or formed and to mnemonic over-learning:

As far as learning of vocabulary is concerned, one could split up words into parts of speech, which would be sorted out into groups using different colours such as green for nouns, red for verbs, blue for adjectives etc. Then one could go further by splitting up common nouns from proper nouns, or verbs that precede different prepositions by using different shades of the colour of the group. The pupil could keep the most recently learnt words on cards on a key ring, so that he/she can review them visually and aurally. The well-remembered cards can then be organised in a box according to how securely the words have been memorised. This concept can of course be used by non-dyslexics who would write the L1 word on one side of the card and the English word on the other side. It is an excellent way of learning vocabulary and they can reflect on their knowledge by sorting out the cards. It is not necessary for non-dyslexics to use different colours. In or by the box the pupils would have a sheet where they tick off the words that were reviewed and memorised or not with a '+' or '-'. This exercise can of course be used in class using the boxes and the cards. Both dyslexics and non-dyslexics work together. The teacher can use this concept for testing and reward the pupil with the highest effort.

Spelling correctly is important. The aim for the pupil is to reach automaticity in correct spelling which is difficult when confronted with irregular words that do not follow specific patterns, thus great letter sequence tracing and the simultaneous pronunciation of each letter is necessary. For words that cannot be sounded, the dyslexic traces the letters and pronounces their letter names i.e. the sound the letter makes when it is said in the alphabet along with each traced word. At the end of the word the pupil blends the word together into what it really sounds like and signals this by sliding a finger under the letters. For words that can be sounded out, the pupil goes about over-learning otherwise. Each letter of the word is traced again but this time not the letter name is pronounced but a sound for each letter pattern. Kinaesthetically the pupil again signals this by sliding his/her finger under the letters. Another way would be for the pupil to use finger-tapping. Here the dyslexic taps each sound in a syllable

with the non-writing hand to a word with more than one syllable e.g. if we take the word 'under', a word with two syllables, the dyslexic taps the first syllable 'un' with the thumb and the forefinger saying each sound and then writes the corresponding letters down. With the second syllable 'der' the pupil repeats the tapping method by using three fingers for the three different sounds. The pupil should then go over the word that it has written, checking that all the letters are there, written correctly and in the right chronological order. The finger-tapping system becomes more and more useful as the mnemonic competence of the pupil increases and he/she begins to learn more complex words. After the teacher has introduced the technique well enough, the children can start practising on their own.

What is to be done with pronunciation? The teacher should show the pupil how to pronounce a word correctly by exercising the right mouth movement. For EFL learners difficulties may arise in specific English pronunciations not found in most other languages such as 'th' in 'thought' and 'this', where the teacher should show or demonstrate how and where to place the tongue before pronouncing. Other examples are the diphthong vowels as in 'boat' and 'no' or 'loud' or 'now', the consonant 'w' as in 'where' or 'why' and voiced 'j' as in 'James' or 'June' which may cause difficulties especially for German speakers and for native speakers of other languages where this phoneme does not exist. Complex consonant formations should also be practised such as in 'thwart'. Humorous mnemonic devices can be used in class which can make learning fun and can motivate better than working in labs listening to instructions from a tape recorder, CD or watching a DVD. By actively practising in class not only can the children learn pronunciation but they can strengthen their skills in reading, speaking, and spelling tasks. Schneider/Crombie suggest devoting 5-10 minutes on sound-letter instruction where the pupil stands in front of a mirror to see him/herself pronouncing. If the pupils recognize sound patterns that go with articulation, they can note these down for reference by sorting out lists into 'specific letter patterns', into 'what to do to pronounce it', 'how to remember to pronounce it correctly', into 'keywords that help trigger the pronunciation in English' and into 'other spelling with the same pronunciation' Activities to follow

on from these could be reading short and easy texts and poetry, progressing to more difficult ones as competence improves.

The question of word and sentence structures can be seen as follows: by memorising certain colour-coding systems dyslexics can master certain sentence structures and grammatical word structures such as verb conjugations, adjectives or noun declensions. Repetition is of importance here. The teacher can increase the difficulty level of the tasks by adding colour-coding into the texts and letting the pupils examine the new words or phrases in comparison to similar ones already learnt e.g. verb endings take the colour of the noun they are referring to.

As far as text structures are concerned, the aim is to able dyslexics to create logical sequences in narrative text structures using organised kinaesthetic/tactile learning. Here, the dyslexic tries to link key ideas to keywords using colour-coded cards. The cards should be big enough to change keywords into sentences. Each part of the text has a different colour e.g. the topic sentence of the paragraph is green, supporting details is in yellow, with red for examples that support each detail, and blue ones for conjunction words such as 'but' or 'and'. The green sentence is the overall topic sentence and the yellow card topics are listed below. The final paragraph repeats the green sentence in a slightly different way. Thus, texts can be constructed using the different colour codes in connection with one another. These colour codes can be moved around depending on the coherence and cohesion of the texts. This can also be done alone, one-to-one or in groups whereby the creative talents of the children can be supported with this concept since at this level where the dyslexic has a sound vocabulary and knowledge of grammar, the teacher can let the children handle and further their knowledge more on their own. (Schneider/Crombie, 51pp.)

The system of learning is built up from the letters that are pronounced to the production of long complex texts. To master EFL means moving through these steps chronologically, memorising and over-learning material so as to increase automaticity, which means letting the unconscious absorb much information so

that more information can be consciously accepted by the brain, which in turn is stored in the unconscious and so on, the ascertaining of language improving all the time. This is the goal for dyslexics as well as non-dyslexic pupils. As already discussed, the main goal of reaching mastery is more difficult for dyslexics who need other concepts to help improve their reading and spelling deficits. Due to meta-cognition, meta-linguistics and mnemonic devices, ways have been found to help dyslexics tackle their disabilities such as those presented by Schneider/Crombie i.e. using colour codes and cards. To guarantee success in EFL learning not only do the right concepts have to be used and adapted to each individual learner, but the concept of working as a team with non-dyslexics will give dyslexics the motivation and realisation that the school system has adapted to their requirements and that they have just as much potential to acquire a foreign language as every other non-dyslexic.

4.4 Technology for Dyslexics. Using ICT³⁷ in and out of the EFL classroom.

Living in the beginning of the 21st century has many advantages as far as EFL teaching and learning are concerned since language pedagogy can make good use of new technological inventions such as television, radio, audio players (such as CD or tape) and computers. These are all excellent for practising listening comprehension, grammar, vocabulary, pronunciation and syntax. But how do these technological resources help dyslexics? As we have already discussed, not only can conceptual understanding be used for successful mastery of the language but also other methods such as the meta-linguistic one.

Schneider/Crombie refer to certain technological resources that can help in EFL learning. These are of aid of furthering independence where the technology is available outside the classroom for instance at the pupil's home which makes it easier and convenient to learn. Facility – the technology can be used in such a way that the pupil can practise repetition to the extent of experience success in

³⁷Stands for Information and Communication Technology.

learning. Variety is an important point since the dyslexic can use a variety of technologies as often as he/she likes for over-learning purposes. Technology should be able to slow down in speed as far as spoken language is concerned so the dyslexic can memorise information better if the task is still too difficult. Furthermore the dyslexic should be given the possibility of working with as many channels as possible such as the move-touch concept to balance out weaknesses in auditory and/or visual processing skills. (Schneider/Crombie 2003, 78)

Still, with all the freedom that technology brings with itself, the EFL teacher should still be in control of what the pupil is learning and should check if the methods used in the technology are bringing him/her forward towards mastering the language. If the technology is not of use in a full extent then following concepts as far as the learning of the material is concerned should be applied:

The concept of kinaesthetic/tactile learning should be added to computer assignments so that the dyslexic can trace difficult words or parts of words on the screen or by using the mouse and simultaneously touching the screen. This helps dyslexics grasp and memorise difficult information and answers better. A combination of kinaesthetic/tactile learning and tools such as writing, saying and thinking aloud about problems in vocabulary and grammar should be used in conjunction with computer-based exercises. Dyslexics should have access to computer- and CD-ROM-based exercise opportunities outside the classroom i.e. at home, and based on their independent study time, the teachers can offer rewards or introduce a rewarding system to compensate for the time these pupils need out of class to compensate for the work they cannot achieve in class.

Socialising is an important human necessity. Dyslexics should be paired with non-dyslexic better learners who help the dyslexics in technology-based activities, where both act in multi-sensory learning and think aloud. This makes learning not so frustrating for dyslexics and can also be fun for non-dyslexics. Teachers should check timing, since dyslexics should be given extra time to

finish work that is computer-based so they can process the information better and revise the assignments. (Schneider/Crombie 2003, 79)

Crombie/Crombie have come up with ideas where ICT has, is and can help dyslexic students in almost all language-based subjects such as with EFL learning. These are:

- Visualizing – Due to the fact that dyslexics have good visualizing skills, and prefer thinking in pictures rather than words which makes them very creative ³⁸, they use mind-mapping ³⁹ to build relationships between concepts using a visual map before they start to write. With the use of programmes such as MindMan to produce mind-maps, plans or outlines in form of drawings can be produced, stored and then taken over into word processors to develop further until completed.
- Organizing – Computers act as a good balance when it comes to inspiration. For dyslexics it can be very hard, almost impossible to coordinate tasks that require routine, repetition and detail which the computer can take over. They can search, sort, organize, format, summarize, and formalize. Thus ICT can allow students to use both parts of the brain to present material which would mean presenting material visually without tiresome sequencing, structuring and formatting.
- Word processing – For dyslexics word processors have the function of taking over tedious routine tasks which would enable dyslexics to focus on more challenging tasks. For dyslexics there are special programmes such as ‘Co:writer’ that reduce the number of keystrokes that are required by a typist by predicting possible word choices or word endings. They follow grammatical and syntactical rules like subject-verb agreement which help dyslexics to recognize the word more easily. Programmes such as ‘Write:Outloud’ help the dyslexics to get rid of the problem of recognizing what a word spells or says. Some programmes can also produce text-to-speech output from normal word processors such as ‘Word’.

³⁸ See Davis, 109pp.

³⁹ See http://en.wikipedia.org/wiki/Mind_map.

- Graphing and charting – Spreadsheets are also useful for repetition and automaticity regarding numerical processes and the automatic creation of graphs and charts. With the use of word processing packages, the dyslexic can use fonts that look similar to handwriting such as ‘Sassoon’ to create texts in styles similar to handwriting and can be added to graphs and charts to increase the level of presentation.
- Keyboarding – It seems logical that dyslexics until now have had difficulties in using keyboards since they could not master the skill of touch-typing or at least ‘finger-picking’ to reach the speed of normal handwriting. Although creativity may have increased, the time to complete tasks would have taken too long due to problems in recognizing the right keys with an adequate speed. It would thus be advisable to use methods such as speed recognition which would save a lot of time. This of course varies from pupil to pupil.
- Speech – Here the computer talks to the pupil and tells him/her where mistakes have been made in word processing, pointing out the spelling mistakes and helping the dyslexic to pick alternatives from lists of similar sounding or similarly spelt words. The computer reads out the text that the pupil has written where the pupil can hear which words sound wrong such as ‘hide’ for ‘hid’ or ‘his’ for ‘this’. Programmes such as ‘textHELP!’, ‘ProVoice’ or ‘Monologue’ read out the saved texts or texts from web pages aloud which allows the pupil to concentrate on understanding the material rather than having to spend the time decoding graphemes.
- Speech recognition – These systems convert spoken words into texts. The computer has to recognize the voices of the users, which may have to be programmed in beforehand. Until now the use of such programmes required the user to speak very slowly and clearly with longer gaps between words. However, new programmes such as IBMs ‘Via Voice’ allow for users to speak normally i.e. fluently without staccato interruptions which may be difficult for some dyslexics. Therefore planning methods with computer-based planning tools which the pupils already know should be used. These will help ease efficient and effective production of written work. Microphones that are supplied with these speech recognizing systems are often cheap and not suitable for the classroom. Suitable

microphones with integrated headphones should be used so that the teacher can be heard over a master volume as used in normal language laboratory lessons.

- Interactive video – Pre-recorded videos are used a lot in schools and universities in creating and reinforcing material.
- Video-conferencing – This is a tool that can be used for real-time distant teaching. This allows for two-way interaction between pupil and teacher. If all computers in the classroom were equipped with this know-how, of course under the control of the teacher, then teaching would commence in a new direction.
- Internet and intranet – With the invention of the internet, the world has become united more than ever with endless possibilities for learning and spreading information. It can also be a dangerous medium for new learners. The internet is a place for connecting institutions and organizations which from an educational point of view may be too anarchistic. Therefore the use of intranet would be of far better use since this can be used as a medium for connecting people within organizations and establishments. Schools can build up their own intranet from which children can not only learn in the classroom but also outside i.e. at home. The intranet has four highly connected components namely the World Wide Web and Web browsers, electronic-mail (e-mail), file transfer and newsgroup. These have developed rapidly in the last years and each are attractive in their own ways for dyslexics and teachers. Most of the internet-based applications are holistic, non-sequential and multi-sensory using text, graphics, sound and animation and are thus ideal for dyslexics. They can use this to create texts in their preferred font, font size, font colours, background colours and they can also use speech output. The World Wide Web is great for trying to find information and the dyslexic only has to put in part of a word in a search machine to find unlimited resources on information he/she wants. As far as newsgroups within establishments such as schools are concerned, dyslexics can let their texts be grammar and spellchecked before submitting them to the file sharing scheme. (Crombie/Crombie 2002, 222pp.)

So what does this mean for EFL learning and teaching? With such an expanding world and unlimited access to internet and intranet, computers and other technological inventions, ICT-based learning will become ever more important. It opens up immense possibilities for dyslexics with reference to word and text processing software and voice-text programmes that make life easier for the pupil and also for the teacher. As with all languages programmes EFL learning will be based on pronunciation, grammar, text production, syntax, listening comprehension and other language related tasks. The role of the teacher could become more and more obsolete. He/she may become more of an 'observer' in the classroom than a 'doer' or 'pacemaker'. The shift from implicit to more explicit teaching methods will be on the rise with use of multi-sensory teaching methods and kinaesthetic and tactile concepts. Nevertheless, with all the new ideas and methods of teaching, teachers, parents, pupils and policy makers should not forget the main goal of EFL learning namely transferring information from one code (L1) into another (L2). How this is done is up to policy makers and teachers. The information will not change whichever ways and concepts one uses because pronunciation, grammar, syntax, spelling and reading will still be part of the whole game of foreign language learning. To help dyslexics master English as a foreign language, one should be aware that language cannot be changed to suit the pupil or the teacher. The teaching techniques and tools to do so must be used in the best possible manner to integrate, support and 'connect' those with reading and writing deficits into the classroom and indeed into life.

Conclusion

The final words are brief and to the point since there is no exact answer to the question of why dyslexia exists. The reason may be genetic and/or psychosocial. More important therefore are the teaching approaches, concepts and methods to be introduced into the syllabus if not yet done so to ensure that dyslexics are rightly integrated into the classroom with non-dyslexics (rather than segregated into special schools). Moreover, dyslexics need more motivation than non-dyslexics to compensate for their deficits since they cannot cope with all the teaching methods that require too high a level of reading and writing ability. This would not only mean extra effort on behalf of the teacher to create a positive atmosphere for these special pupils, but would also mean 'balancing out' the teaching methods between normal readers and spellers and dyslexics., introducing colour pens and cards that could also be fun and productive for non-dyslexics. This would mean applying meta-cognitive and meta-linguistic concepts that would help dyslexics master EFL through memorising and automaticity. With the use of computer and internet the dyslexic is furthermore acquainted with a whole new world for learning, where he/she can explore and use different teaching aids and tools to strengthen and speed up learning, operating on his/her greatest gift, namely creativity.

All in all the idealistic approaches to teaching EFL seems fitting in concept where dyslexics and non-dyslexics are to harmonise and merge together in courses and indeed syllabuses but in reality will this work? To guarantee a success in meta-cognitive and meta-linguistic approaches and using mnemonic devices for EFL teaching and learning, following questions should be asked:

- How much of these concepts can be integrated into the syllabus and classroom activities to keep the standard of teaching and learning at the highest possible level?
- How far will these concepts distract from the usual language learning concept of non-dyslexics since some of these would take more preparation time for the teacher?
- How far will these concepts distract from the usual language learning concept of non-dyslexics since dyslexics would need special attention on some of the tasks to be dealt with?
- Do non-dyslexics react positively to these approaches to teaching if dyslexics are in the minority? Does the majority feel 'held up'?
- If the non-dyslexics feel negatively about these approaches, how can the teacher 'force' a comfortable solution to abide by the given standards but still include such approaches for dyslexics in the EFL classroom?
- How does the teacher go about lesson planning, knowing that dyslexics' speed of learning compared with non-dyslexics may be different?

- Do dyslexics feel comfortable learning with these concepts with non-dyslexics?
- Will these concepts cause problems outside of class between dyslexics and non-dyslexics?
- What effect will these concepts have on the school syllabus in general (in terms of altering)?

Policy makers have to be aware of these concepts and with the help of teachers, a system can be devised where both dyslexics and non-dyslexics can learn together. For both, the correct solution would be to allow meta-cognitive concepts to be part of the syllabus without decreasing the standards and levels of teaching from a qualitative and quantitative point of view. It would then be up to the teacher to carry out the courses bearing in mind that teaching should be kept at the highest standard possible without discriminating children with reading and spelling deficits. If the teacher can motivate the classroom in the right direction, there should not be any problems in keeping motivated teaching and learning at a high level to guarantee success for both dyslexics and non-dyslexics.

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Abstract

Dyslexia is one of the causes of social and psychological problems among pupils at school that can be solved. The dilemma of reading and spelling *deficits* associated with dyslexia, if not dealt with by teachers, parents and policy makers can result in many not being able to benefit from their potential for entering higher education and indeed a better life, since their talents go unnoticed and they are sadly 'shoved by side' as retarded and/or problematic youngsters.

There is no direct answer why dyslexia exists, neither is there a cure. The aim is thus to find and present the best definitions of dyslexia, why it exists and use them to find methods, concepts and strategies for teachers to successfully put into use in EFL learning where spelling and reading is crucial, as opposed to Mathematics and the Arts, and thus a great challenge for both pupil and teacher.

At first hypotheses such as the Phonological Deficit Hypothesis and the Cerebellum Deficit Hypothesis are explained in connection with a genetic disorder that could be the cause of the deficits. These form the basis of reasoning how the dyslexic pupil interpellates with his/her surroundings from a psychological and social point of view. Teacher/pupil relation will then decide which approaches, concepts, and methods can ensure success in teaching EFL to dyslexics. The methods presented are meta-cognition, meta-linguistics and mnemonics which through theories and examples will prove the best way of motivating and thus integrating dyslexics into the normal school curriculum with better prospects of a successful future.

Zusammenfassung

Legasthenie bei SchülerInnen ist einer der Ursachen für soziale und psychologische Probleme, welche gelöst werden kann. Die Problematik mit Lese- und Schreibmängel in Verbindung mit Legasthenie, könnte dazu führen, dass viele Kinder ihre Möglichkeiten, eine höhere Ausbildung und damit einen besseren Lebensstandard zu erlangen, nicht ausschöpfen können, falls die Legasthenie von den LehrerInnen, den Eltern und den Gesetzgebern unbeachtet, und ignoriert wird. Die darauf resultierenden Folgen wären keine Förderung der Begabungen, und die Einstufung der Betroffenen als behindert oder als Problemkinder.

Weder gibt es eine eindeutige Erklärung für die Ursache der Legasthenie, noch ein Heilmittel dafür. Dadurch wäre das Ziel, bestmögliche Definitionen und mögliche Ursachen in Bezug auf die Entstehung der Legasthenie zu erläutern, und sie dann erfolgreich durch den Lehrkörper mit Lösungen, Konzepten und Strategien im Englischfremdsprachenunterricht umsetzen lassen. Dabei dürfe man im Gegensatz zu Mathematik und Kunst die Wichtigkeit von Rechtschreibung und Lesen nicht außer Acht lassen, was eine große Herausforderung für SchülerIn und LehrerIn mit sich bringt.

Als erstes werden Hypothesen wie die Phonologische-Defizit-Hypothese und die cerebelläre Defizit-Hypothese in Zusammenhang mit einer genetischen Störung als mögliche Ursachen für Legasthenie erläutert. Diese sind die Grundlagen für Argumente, wie man die soziale Interaktion des/r legasthenischen Schülers/Schülerin aus psychologischer und sozialer Sicht begründet. So entscheidet sich, welche Methoden und Konzepte sich erfolgreich im Englischfremdsprachenunterricht bezüglich LehrerIn/SchülerIn-Beziehungen durchsetzen. Die in meiner Arbeit angeführten Methoden beinhalten Metakognition, Metalinguistik und Mnemonik, welche sich durch Theorien und Beispiele den besten Weg der Motivation, Integration und bessere Zukunftsaussichten der Legastheniker in den normalen Schullehrplan erweisen.

Curriculum Vitae

Born:

07.12.1973

Place of Birth:

Dares salaam, Tanzania

Marital Status:

Single

Religion:

Hindu

Parents:

Aloke Kumar (UNO Regional Adviser for Africa, born 1936, deceased 2004)
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Brother & Sisters:

1 sister: Anita Mitra (born 1964, secretary)

School Education:

1976 – 1978

Kindergarten, Sliema, Malta

1978 – 1982

Primary School English Stanford School, Addis Ababa, Ethiopia

1982 – 1987

Preparatory school West Downs School, Winchester, England

1987 - 1992

GSCE and A Levels at Marlborough College, Marlborough, England

University Education:

1992 – 1995

Department of Translation Studies, University of Vienna

1997

1st Diploma in English and American Studies, University of Vienna

2001

1st Diploma in German Philology, University of Vienna

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1st Diploma in French Studies, University of Vienna

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Certificate in Social Sciences, Open University, Milton Keynes, England

2004

Final Certificate of General Pedagogical Training and Practical Training for Students of Teaching (English and German)

2005

2nd Diploma in German Philology, University of Vienna

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Diploma in Economics, Open University, Milton Keynes, England

Languages:

English: very good

French: good

Russian: beginners

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Latin: adequate

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Geburtsort:

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Familienstand:

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Eltern:

Aloke Kumar (UNO-Entwicklungsberater für Afrika, geb. 1936, verst. 2004)
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Schulbesuch:

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Universitätsstudium:

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Abschluss des 1. Abschnitts des Studiums Anglistik und Amerikanistik, Universität Wien
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Abschluss des 1. Abschnitts des Studiums Deutsche Philologie, Universität Wien
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Abschluss des Zertifikates des Studiums Sozialwissenschaften, Open University, Milton
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Abschluss der pädagogischen Ausbildung für Lehramtsstudierende (Englisch und
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Abschluss des 2. Abschnitts des Studiums Deutsche Philologie, Universität Wien
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Abschluss des Diploms für Volkswirtschaft, Open University, Milton Keynes, England

Sprachkenntnisse:

Englisch: ausgezeichnet

Französisch: gut

Russisch: Grundkenntnisse

Isländisch: Grundkenntnisse

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