UNIVERSIDAD DE CASTILLA LA MANCHA
DEPARTAMENTO DE FILOLOGÍA MODERNA

Teaching English as a Foreign Language to Blind and Visually Impaired Young Learners: the Affective Factor

Tesis Doctoral

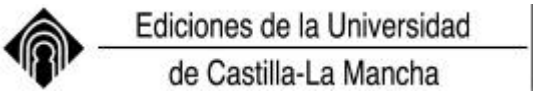
Autora: Helena Aikin Araluc
Dirgida por: Maria José Feu

Ciudad Real, septiembre 2002

Helena Aikin Araluce

TEACHING ENGLISH AS A FOREING LANGUAGE TO BLIND AND VISUALLY IMPAIRED YOUNG LEARNERS: THE AFFECTIVE FACTOR

I.S.B.N. Ediciones de la UCLM
84-8427-365-2



Cuenca, 2005

I feel very grateful to all children, parents and teachers who have helped me to develop this project. A special thanks is due to Segunda Silva, my invaluable informant about blindness who has provided all major contacts with experts, schools and pupils relevant to this study; also to her colleagues Fina Yago and Mila Bouveta, who invited me to join them in their periodical visits to mainstream settings catering for children with vision loss.

I would like to thank my thesis supervisor Maria José Feu as well, and my family and friends for their support.

Index

0- Introduction

Fluency in a foreign language –especially English- is a highly valued asset in the current Spanish labour market and consequently there is a generalized desire among young people to learn another tongue. Individuals with visual impairments could particularly benefit from mastering a second language, as it would increase their professional opportunities as well as enhance their integration into the society of the sighted; EFL is therefore an important school subject for children with *sight loss*.

Extensive research has been done on the influence of motivation and attitudes upon the learning process and it is generally acknowledged that there exists and interrelationship between a child´s disposition towards a certain subject and his level of achievement (Strong 1984; Gardner 1985; Crookes & Schmidt 1989; Ellis 1994; Schumann 1997). In the area of foreign languages –particularly where young learners are concerned- the teaching materials developed in recent years are carefully designed to promote

the pupils´ motivation by tackling subjects that appeal to their age group as well as by proposing highly stimulating tasks involving their favourite activities. Unfortunately, most of this instructional material concerns the sense of sight and therefore excludes children with visual impairments, thus hampering their full inclusion into the mainstream English classroom.

It can be concluded from the scarce existing literature concerning second language acquisition in blind students that blindness itself does not obstruct the learning process of a foreign tongue; quite to the contrary, their aural sensitivity and memory training seem to place them in an advantageous position with respect to their sighted counterparts provided there are adequate pedagogical and methodological conditions (Dorstet 1963; Snyder & Kesselman 1972; Nicolic 1987). However, the current instructional materials –unlike those used in more traditional foreign language teaching methods- are highly visual, and blind learners are expected to manage with the braille version of a regular textbook whose motivational impact relies heavily on illustrations and photographs. For pupils enrolled in *special* schools the situation is not so serious, as in this type of setting teaching aids are carefully adapted to reduce or substitute the

visual information; but nowadays most pupils with *special needs* opt for a regular school, as in the current educational climate there is a marked tendency to integrate *all* children into the mainstream system. An ordinary setting is thought to widen the impaired pupils' opportunities for social interaction with non-disabled peers as well as ensure that they are exposed to exactly the same academic standards. On the other hand, *full inclusion* can be a great challenge for a visually impaired pupil, who has to conform to a group of fully sighted peers who learn modern languages –among other subjects- through textbooks and teaching aids full of visual information. This can seriously affect the learning process of the blind, who are supposed to enjoy the same opportunities as their non-impaired counterparts and should therefore have access to instructional material with high motivational impact designed to promote the use of the remaining senses. As a result, these children are often low achievers, mainly due to the inadequacy of the learning material, which contains very little stimulus for a person who cannot see.

The purpose of this study was to explore the difficulties that blind or visually impaired pupils face when acquiring a second language with a view to developing *tactile* instructional material to

facilitate their learning process and thus prove that, when taught through a method that takes their sensory deficiency into account and addresses both their cognitive and affective aspects, the blind young learners´ attitude towards foreign languages improves, and so does their academic performance.

In order to carry out this research I feel compelled to plunge into a number of related study areas, ranging from the impact of *blindness* on cognitive development and first language acquisition to haptic perception or the controversial issue of educational integration.

In the opening chapter the concept of holistic education is explored and the most prominent theories concerning affective learning applied to EFL reviewed. It was considered important to investigate this *whole learner* teaching approach because the tactile instructional material developed for this study closely follows the guidelines suggested by supporters of humanistic education.

The second chapter is concerned with the terms *blindness* and *visual impairments* and the impact of the different eye conditions upon a child's learning process.

The third is devoted to the possible consequences of *blindness* upon first language acquisition; The prevailing theories regarding the role played by perception in cognition are reviewed, along with current research on the influence of syntactic information on language development.

In the next, the educational options open to children with *visual impairments* in Spain are discussed: the advantages and disadvantages of choosing a mainstream setting versus a *special* school and the support that these pupils receive from the Spanish Educational Authorities and the O.N.C.E (Organización Nacional de Ciegos Españoles).

Chapter 5 deals with second language acquisition in children with *vision loss;* I first review the scarce existing literature and then analyse current EFL teaching materials and the problems they can pose for the blind learner.

Chapter 6 focuses on the mainstream English classroom with

visually impaired learners. Firstly I summarise the basic guidelines found in the Spanish National Curriculum in foreign languages and how they are put into practice in regular schools; then I outline the problems that the current teaching practice poses for blind young learners.

The following chapter is devoted to graphic representation through the sense of touch: how blind people are able to interpret and produce graphic symbols and even art work of a visual nature. This information regarding haptic perception is relevant to this thesis because the proposed instructional material for blind learners contains tactile illustrations and includes art-related activities.

Chapter 8 is dedicated to the methodology used for the experimental work involved in this thesis, described in detail in the chapter 9. The fieldwork consisted of 2 pilot studies with blind and visually impaired subjects enrolled in the second cycle of primary education; the first study concerns the use of tactile instructional material with children integrated in a mainstream setting; pilot study II is an experimental monographic unit of work tested on a mixed

group of bind, visually impaired and sighted pupils attending a summer camp organized by the O.N.C.E in July 2002.

The study concludes with a reflection on current educational practice: its strengths and weaknesses, the distance between pedagogical philosophy and everyday reality, the feasibility of truly including people with *special needs* into the society of the non-impaired.

1- Holistic Education

> The right kind of education, while encouraging the learning of a technique, should accomplish something which is of far greater importance; it should help man experience the integrated process of life. (Krishnamurti 1955; 18)
>
> We may be highly educated, but if we are without deep integration of thought and feeling, our lives are incomplete, contradictory and torn with many fears; and as long as education does not cultivate an integrated outlook on life, it has very little significance (Krishnamurti 1955 ; 11)

1.1. The goal of education

For Indian philosopher Jiddu Krishnamurti educating a child consists in helping her grow to her fullest integral capacity by enabling her to understand the *total process of herself* and awakening her ability to perceive the essential; in other words, it entails the creation of integrated, mature and free human beings with pliable minds, capable of dealing with life as a whole and therefore of

establishing *a new social order and enduring peace* (Krishnamurti 1955; 42)[1].

Krishnamurti argues that any form of education that addresses just one aspect of the individual ignoring the whole tends to turn out *mechanically efficient people with* ruthless, *cunning minds* who are permanently antagonising each other and whose fossilized attitudes and beliefs are the chief cause of the chaos and misery that characterises our world. He stresses the urgency of a fundamental alteration in human relationship, which could only come about through an educational system that cultivates freedom and intelligence and where the child is taught *to observe and understand himself in relation to all things*

> *for it is only when there is integration of the mind and the heart in everyday action that there can be intelligence and awakened transformation* (Krishnamurti 1955;45)

[1] Krishnamurti founded Brockwood Park School (England) in 1969. The school´s commitment is "to educate young people to meet life fully" "to explore what freedom and responsibility are in relation with others and in modern society" "to see the possibility of being free from self centred action and inner conflict" "to discover one´s talent and what right livelihood means". Thus, while paying due attention to academic excellence, the school seeks to turn out individuals capable of inquiring into the complex ways of human existence and of leading a sane, integrated and intelligent life; in other words, people able to find creative solutions in "a world of environmental, social, economic and political crisis". (www.Brockwood.org.uk).

The idea of education as a life long enterprise connected to the search for truth and virtue is far from new; it impregnates the works of ancient Greek philosophers and is summarised in the world famous proverb inscribed on the temple of Apollo at Delphi *know thyself*. However, western educational philosophy has traditionally focused on the rational aspects of learning, neglecting the emotional and spiritual sides of the human being. Thus, it has lost sight of the ultimate goal of education, which for many educational philosophers is related to the development of the full potential of the students: Krishnamurti uses the term *completeness* to refer to the state of integration reachable for a human being who has been exposed to the *right kind of education* and not merely to an *efficient training of the mind*.

It can be concluded that a holistic educational approach would seek to develop the intellect of the student as well as help him grow emotionally, creatively and even spiritually; in other words, it should encourage him to become *more fully human* and this goal can be achieved through the teaching of any subject-matter (Gattegno 1975).

Learning ultimately means obtaining knowledge about oneself, others and the world (Curran 1972); it entails the assimilation of the target material which in turn broadens the mind and improves the student´s understanding of his mental and emotional processes and of the world at large, thus contributing to his holistic development. So the enhancement and promotion of the personal growth of individuals should be the ultimate goal of education; this is by no means incompatible with the efficient teaching of academic data; in fact, every target material taught could contribute towards the achievement of this final objective (Moskowitz 1999; Gardner 1993).

Societies whose educational systems fail to view their students as whole, complex individuals with physical, intellectual and affective needs pay a high price; for some scholars it is an extremely serious deficiency that could account for the increasing rate of crime and violence in developed countries; however, this is a highly controversial issue about which there is sharp disagreement among educators and other researchers of human behaviour: whilst some see it as a question of lax upbringing, others relate violence to pain and frustration (Suzuki & Fromm 1964) arguing that a system concerned with the affective and creative aspects of education would

breed less aggressive, more responsible, happier citizens able to contribute to the making of a more constructive society. In contrast, when the emotional education of our students is left to chance it results in what Daniel Goleman calls *emotional illiteracy*, which inexorably brings forth confusion and misery as well as poor academic performance. For this author the solution lies in bringing *mind and heart together in the classroom* through the blending of lessons in emotional skills with the standard school subjects, specially those which naturally merge with issues related to feelings and relationships (Goleman 1995).

Some researchers claim that the holistic educational approach should not just shape the learning process of children and youngsters, arguing that it could also have a beneficial impact upon other areas of society; psychiatrist and pedagogue Giorgi Lozanov sees *suggestopedia* as a model for educational systems that not only would bring forth outstanding academic results –raising, at the same time, emotionally mature, healthier and happier individuals – but which could reach beyond the academic realm and make fundamental changes in the systems of beliefs of society as a whole (Lozanov 1978).

For Howard Gardner these much needed changes could only be achieved through an individual-centered educational approach concerned with the fostering of the development of each student´s cognition profile, which he believes to be unique. In this system – which offers knowledge, understanding and judgement instead of just facts, data and information- students are helped and encouraged to find meaning in daily life as well as to feel bonded to other individuals and to take resposibility for the consequences of their actions; In other words, it is an educational approach that encourages responsibility and humaneness, preparing individuals for life in a global civilization, which is crucial in these *uncertain and turbulent times* for

> *Only those persons who are well and broadly and flexibly educated will be able to function productively in this new world (Gardner 2001; 1).*

All these ideas clash with the everyday reality of most western schools, where the intellectual aspect of learning is greatly favoured at the expense of affect thus preventing the different parts of the learner´s mind and personality from working harmoniously together

(Stevick 1980). This oversight of basic human needs, apart from rendering people *inwardly incomplete, stultified and uncreative* –which is reflected in our dull, impersonal present day societies (Krishnamurti 1955)- deprives people from the sense of well-being and wholeness which *learning for the love of knowledge* brings forth, as it encourages extrinsic motivation –whereby people act only in order to obtain an exterior reward (Csikszentmihalyi 1990).

In summary, educating the *whole person* entails developing the intellectual potential as well as integrating feelings and emotions into the learning experience in order to increase self-knowledge, enhance self esteem and help the individual improve his relationship with others; in other words, it should promote the learners´ sense of worth and well being, as it is argued that a harmonious person who feels well about herself learns much better (Curran 1972; Lozanov 1978; Stevick 1980; Arnold 1999; Moscowitz 1999).

1.2. The theory of Multiple intelligences

Gardner criticizes the current educational system for its endorsement of uniform schools with rigid core curricula that mainly address the left side of the brain, offering very few alternatives to conventional learning (Gardner 1983; 1990; 1993; 2001). He strongly disagrees with the traditional concept of unitary intelligence that varies only quantitatively from person to person and is measurable by IQ tests; evidence from disparate scientific findings as well as from his own research with brain damaged patients led him to the conclusion that mental faculties are located in specific areas of the brain and that some of them work quite independently from others. He consequently inferred that a unitary view of intelligence could hardly explain the phenomena he had witnessed during his experimental work with aphasic patients, idiots savants, autistic children and other brain-damaged people.

Gardner developed the *theory of multiple intelligences,* whereby there are at least 8 different modes of knowing -which he calls *intelligences*- that every individual possesses in varying degrees.

These intelligences, or *abilities to solve problems or fashion products that are valued in one or more cultural or community settings* (Gardner 1993;7) form a unique combination in each individual brain, thus accounting for the very different cognitive predispositions found in the human species:

1- Linguistic intelligence: refers to the ability to communicate through oral or written language.
2- Musical intelligence: the ability to recognize rhythm, pitch and melody and create and communicate meanings out of sound.
3- Logical-mathematical intelligence: allows individuals to recognise and use abstract relations.
4- Spatial intelligence: the ability to understand and transmit visual/spatial information and to recreate visual images from memory.
5- Bodily-kinesthetic: the ability to express ideas and solve problems using the body
6- Interpersonal intelligence: the ability to communicate with other people understanding their motivations and intentions.
7- Intrapersonal intelligence: refers to self-knowledge: ability to recognise one´s feelings and to form a realistic image of the self.

8- Naturalist intelligence: the ability to recognise, classify and make use of different features of the environment.

(definitions adapted from White and Blythe 1992).

However, out of these 8 equally important *frames of mind* the only two that our society truly acknowledges are the capacities we use for solving logical and linguistic problems (Armstrong 1993; Gardner 1993; Brualdi 1996). This oversight of the different intellectual proclivities of the human species results in an educational system that uses the same unidimensional assessment for all children, thus seriously limiting most people´s opportunities to develop their intellectual potential to the full.

In contrast, a school that advocates a pluralistic view of the mind is aware of the great individual differences found in cognitive strengths and learning styles of human beings and therefore ensures that each child has access to the particular way of learning that best suits his spectrum of intelligences (Gardner 1993).

For Gardner it is vital that the system recognises and nurtures this *astonishing range of the human mind* (Gardner 2001), as this would allow people to reach their highest intellectual potential as well

as help them become more balanced, perceptive human beings capable of joining strengths to make the world a more human place (Gardner 1999).

Gardner´s approach to cognition – in contrast with Piaget´s unilinear developmental scheme- is pluralistic and therefore he endorses the learning of the same topic in different ways through the use of our various intelligences, claiming that this renders learned material usable in flexible and innovative ways.

An educational system that fails to acknowledge the diversity of human learning styles has a detrimental effect upon the academic performance of those individuals whose logical-mathematical and linguistic abilities are not dominant within their spectrum of intelligences; these people –who tend to be classified as *weak* students in traditional schools- could improve dramatically if their particular intellectual profile were carefully assessed and the learning material adapted to fit their unique learning style. Gardner argues that computer programmes have rendered individual-centered education feasible even for large classes; it is just a question of

making the necessary adjustment in our views about education (Gardner 2001).

The theory of multiple intelligences is particularly relevant to this research project for a number of reasons: firstly because this study is about blind pupils who, due to their sensory deficiency, tend to have adjusted their learning patterns in order to compensate for their absence of sight; it is therefore crucial to take into consideration learning style variation when designing and developing instructional material for them. This material should also incorporate the use of as many senses as possible as well as stimulate both hemispheres of the brain. Secondly, nowadays most western blind and visually impaired young learners –as well as other children with special needs- are integrated in mainstream schools, which renders uniform education unfeasible, for a system that endorses full inclusion can only teach learners efficiently through an individual-centered approach.

1.3. The affective factor

Traditional western education -by favouring the rational aspects of cognition- undermines the role played by the subconscious mechanisms of the human brain in the learning process.

For Lozanov –who developed S*uggestopedia* for the teaching of foreign languages- learning involves both the conscious and unconscious functions of the mind, for the brain works as a complex, indivisible unity. It is only when the whole mechanism is involved that the best learning takes place. He contends that human beings have unsuspected reserve capacities which can be activated under certain conditions related to the unconscious channel for information processing: through S*uggestopedia* students reach a state of creative pseudo-passiveness whereby they experience an internal superactivity accompanied by an economising of energy that allows them to apprehend the programme emotionally with little intellectual effort: in this state of mind it is easy to overcome what he calls *the antisuggestive barriers* –social and historical norms responsible for our pessimistic view of our learning capacity- thus allowing for more efficient, better quality learning. Lozanov considers *Suggetopedia* to be *a psychotherapy through learning system,* as it activates the

whole creative personality of the student thus contributing to his psychological well-being. He claims that in some cases it has greatly improved the health of learners suffering from acute neurosis (Lozanov 1978).

In *the Silent Way* –developed by Caleb Gattegno during the 1970´s- it is considered that apparently inactive states of mind -such as sleep or profound relaxation- play a crucial role in the harnessing of learning; thus the significance of silence for this language teaching method (Gattegno 1976; Stevick 1980).

Likewise, Krashen concedes great importance to the subconscious side of cognition, claiming that foreign language learning is more successful when it resembles the acquisition of the mother tongue by the child, whose final mastery of the language is the result of many subconscious processes (Krashen 1981). For this linguist affective factors also play a vital role in the learning process. According to his Affective Filter Hypothesis, mental blocks –often caused by anxiety- could seriously hamper second language acquisition, as they can prevent learners from utilizing the comprehensible language input.

The affective filter –a term first coined by Dulay and Burt (1977)- refers to

> *that part of the internal processing system that subconsciously screens incoming language based on what psychologists call "affect": the learner´s motives, needs, attitudes and emotional states (Dulay, Burt and Krashen 1982; 46).*

Thus, the Affective Filter Hypothesis underlines the connection between the subconscious processes involved in learning and the role played by feelings and emotions in cognition.

For Stevick –who shares Damasio´s belief about the great influence of emotions over cognition[2]- the different aspects of the learner cannot be isolated from each other, as there is constant interaction among them: thus, what happens in the emotional area affects the student physically as well as her learning process and vice versa (Stevick 1999).

[2] Damasio, A. (1994). *Descartes` Error: Emotion, Reason and the Human Brain*. New York: Avon. Cited by Stevick (1999).

Affect –defined by Stevick *as the way in which purposes and emotions participate in the process of learning* (Stevick 1999; 47)- although vastly underestimated as a mental function in western pedagogy, is quickly gaining recognition in current language teaching practice, as nowadays there is more awareness about the detrimental effect of negative emotions upon the learning process (Arnold 1999; Stevick 1999). In *suggestopedia* psychic tension is reduced by the use of the aesthetic for the creation of an ideal learning environment that facilitates brain integration and harmony (Hooper Hansen 1999); in Community language Learning the student´s self esteem, empathy, motivation and confidence are enhanced in order to stir facilitative emotions (Curran 1976). Rinvolucri proposes the use of *whole person activities* which enable students to discover interesting things about themselves and others at the same time as they learn the target material efficiently (Rinvolucri 1999).

Moscowitz suggests meaningful, motivating exercises where the content is appropriately combined with the feelings, experiences and lives of the learners, as she claims that the better they feel about

themselves, the greater their academic achievement (Moscowitz 1999). Thus, the humanistic approach enhances not only the target language learning process but also the student´s personal growth.

Drawing on her research with mental imagery, Jane Arnold concludes that, as there exists a strong connection between mental images and emotions, *visualization* could be used in order to promote language learning as well as to enhance the student´s creativity and imagination, which, she points out, are often atrophied in this *left-brain world* (Arnold 1999). She underlines the convenience of using images in order to establish associations between emotions and language -thus connecting the target material to the affective side of the learners- as it could result in the improvement of student motivation as well as in the facilitation of the learning process. Arnold underlines that *imaging* does not refer exclusively to the visual process for it also involves the sense of touch, smell, hearing and taste; therefore visualisation is not just the privilege of the sighted and could also be used with blind learners of foreign languages.

1.4. Task based learning

Followers of the task based approach give peripheral perception a central role in the learning process and therefore find it desirable to distract the conscious mind from the learning material; thus, students are encouraged to use the target language in order to perform a task quite unrelated to language itself, paying attention to meaning rather than to form; the theory is that if students focus in meanings and tasks, the language will be learned naturally (Prabhu 1987; Nunan 1989). Among the pioneers of task-based teaching were Allwright in the UK and Prabhu in India, both working in the late 1970´s. The former´s experimental work concerned mainly post-graduate foreign students in Essex University (Allwright 1977); the later designed and carried out the *Bangalore Project* for secondary schools, which was rather revolutionary at the time as it challenged the traditional language teaching practice substituting it by a learning method which consisted in a number of problem-solving tasks (Prabhu 1987).

This teaching approach focuses on the development of the communicative competence of students through the learning of procedures which enable them to do certain things in the target

language as well as on the assimilation of the linguistic content needed to carry them out. Thus, language is treated not so much as an end as as a means:

> *So in Task Based Learning what teachers ask students is that they carry out a series of tasks for which they will need to learn and recycle some specific items of language. The main focus is on the tasks to be done and language is seen as the instrument necessary to carry them out. TBL thus highlights the instrumental value of language (Estaire & Zenon 1994; 12).*

This method has influenced the current language teaching practice in Spanish schools considerably as it was endorsed by the National Curriculum in Foreign Languages, which recommends activities that are meaningful to the learner and enhance communication among peers rather than lead them to focus their attention in language itself:

> *Actividades en las que el alumno no centra sus esfuerzos en el código lingüístico mismo sino en el intento de comprender y transmitir unas informaciones en el seno de una situación comunicativa (Documento Curricular Base; 324).*

It can be concluded that the language classroom offers excellent opportunities for the holistic development of the learner as it deals with meaningful interaction; it is therefore an ideal setting for

issues related to ethical values -such as environmental education, peace and democracy- as well as for the nurturing of pupils´ *interpersonal intelligence* –which should be a priority educational goal if we consider that individuals with well developed empathy will work towards the making of a more harmonious society (Arnold 1999).

1.5. Education and the arts

If we view the language teacher primarily as an educator who should make use of every pedagogical resource available in order to enhance her students´ holistic development (Fonseca 2002), one of the human qualities she could foster in the English classroom is creativity –for Eric Fromm the quintessence of human activities and yet, according to Howard Gardner, sadly neglected by present-day educational practice (Gardner 1990)-.

For Vygotsky the enhancement of the creative powers of the child is crucial for his education, as failure to do so could jeopardise his capacity for scientific, artistic or technical development (Vygotsky 1930).

Howard Gardner underlines the crucial role played by art in cognitive growth, claiming that it is an irreplaceable form of human symbolization responsible for the decoding of symbols of the visual/ spatial type –a symbol system much more holistic than the typically scholastic modes of symbolization which unfortunately in the present day educational practice runs the risk of being substituted by more rational left brain values (Gardner 1990)-. Early encounters with the arts endows the young learner with the understanding in depth of the nature of the *creative act* –for Gardner, a higher level of knowledge and not just a simple accumulation of facts and skills- which is most valuable not only for art work but also for other subject matters:

> *We must be careful not to sacrifice the special nature of the arts- indeed, we might do well to allow this form of understanding to infiltrate other areas of the curriculum (Gardner 1990; 43).*

In *Suggestopedia,* artistic creativity -considered *the ultimate expression of autonomy*- is said to induce a mental state of optimal learning disposition where the brain stretches to the limit while remaining perfectly balanced. Thus, followers of this language teaching method believe that through the stimulation of the

students´ creativity not only the quality of the learning process is improved but also the pupils´ emotional health (Lozanov 1978).

Angoloti stresses the importance of developing the creative expression of young learners if we are to avoid generations of individuals who can only express themselves by means of stereotypes, pointing out that free thinkers are the product of an educational system that fosters creativity (Angoloti 1990).

The arts provide young pupils with highly motivating learning experiences that allow them to explore ideas, create meaning and concepts and communicate thoughts and feelings (Varnon 1997). Education for the arts is therefore a highly important component of learning for all children not so much in order to train professional artists or geniuses –as Nelson Goodman, founder of project Zero of Harvard University *for the advancement of the arts through improved education of artists, audiences and management* pointed out- but in order to develop pupils´ skills of understanding and discovery and to motivate them to use them (Goodman 1976). For Project Zero research team the arts reach far beyond mere entertainment; they are viewed *"like the sciences, as ways of understanding and even of*

constructing our environments and thus we looked upon arts education as a requisite and an integrated component of the entire educational process" (Gardner 2000).

Artistic activities –related to visual arts, drama, music and literature- used in the teaching of any subject facilitate the development of the different intelligences [3]. The *Changing Education through the Arts* program sponsored by the Kennedy Center in Washington DC -whose objective is "to infuse the arts into the teaching of all subjects"- trains teachers from 8 pilot state schools to integrate the arts into every area of the curriculum, including mathematics. The project –now commencing its third year of existence- has been a great success to judge by the reports of the 8 experimental state schools involved, who claim improvements not only concerning the pupils´s academic achievements but also in students´ behaviour and in the learning environment as a whole (Simon 2001).

[3] There is no artistic intelligence *per se*, but rather each of these *frames of mind* can be put to the use of art (Gardner 1993).

This arts-infused approach to foreign language teaching is particularly relevant to this study, as the methodology I have developed in order to prove that blind children learn better through tactile instructional material contains many art activities. Class projects related to the arts are highly stimulating for children enrolled in the first and second cycle of primary school, particularly when the main task involves painting, sculpture, drama and music; in addition, these activities help develop the children´s different intelligences and offer learning alternatives to those pupils who are classified as poor achievers in the traditional educational system.

1.6. Holistic instructional material

To teach foreign languages to young learners addressing both the cognitive and affective domains requires the use of instructional materials designed for the individual´s holistic growth. Earl Stevick calls them *materials for the whole learner*, which *allow students to make a much fuller self investments than other materials do* as they cater for the pupil´s emotions as well as for her intellect, provide occasions for peer interaction and *allow students to draw on their present realities as well as their distant future goals* (Stevick 1980).

For Howard Gardner, the success of the learning process depends not only on adequate instructional material but also on the way it is presented. Thus, an educational system aware of the student´s different intellectual proclivities would use a variety of rich materials in each subject in order to stimulate the different intelligences; he endorses th*e studying of traditional subjects in untraditional ways* in an unconstrained but purposeful class atmosphere where the school syllabus can be studied through student projects which include regular visits to the community for contextual exploring and learning (1993).

In conclusion, holistic education entails the use of materials carefully developed not only to improve the student´s knowledge of the subject matter but also to awaken the individual´s desire to learn as well as promote his emotional skills.

1.7. The holistic teacher

> *The right kind of education begins with the educator, who must understand himself and be free from established patterns of thought; for what he is, that he imparts. If he has not been rightly educated, what can he teach except for the same mechanical knowledge in which he himself has been brought up? (Krishnamurti 1955; 100).*

All educational philosophy concerned with holistic learning makes great demands on the teacher, who, apart from holding professional academic qualifications, should be a mature, integrated individual with a well developed *emotional intelligence,* devoted to her personal growth *and capable of awakening and sustaining the child´s critical alertness and keen insight* (Krishnamurti 1955).

In suggestopedia her personal qualities –resilience, enthusiasm, maturity, efficiency- are an integral part of the method, which only works if teachers have a positive, creative and stimulating influence on the learners –to the point of getting them to believe in their own unsuspected mental reserves in order to allow for the accelerated learning advertised by this language method to take place (Lozanov 1978). Likewise, it is the teacher´s responsibility to create a harmonious environment in the classroom, crucial for the success of the learning experience (Stevick 1980); this entails addressing the

whole learner at all times and not just his strictly academic needs for achievement and approval.

In Community Language Learning teachers and learners share a partnership of affection and mutual support where each party gracefully accepts the contributions of the other; the teacher -who partly plays a redemptive role- is specially concerned with building the student´s security at each stage of the learning process, as this educational philosophy considers that personal security enhances growth, reorganization and renewal, whereas a depleted self remains stagnant (Stevick 1990).

As Moscowitz points out, teaching through humanistic techniques gives educators the opportunity of becoming professionally more resourceful as well as of incrementing their own self knowledge and developing their *interpersonal intelligence*; in other words, it enhances their own personal growth (Moscowitz 1999).

In summary, it is my contention that education should be concerned with the development of the cognitive, affective and

ethical aspects of the human being in order to promote the growth of the learners to their full potential. This ultimate goal should be present in the teaching of every subject matter, where the learning experience would ideally involve academic knowledge as well as work related to the *interpersonal and intrapersonal intelligences*.

An educational approach that enhances the students´ creativity and self-expression encouraging inquiry into the complex ways of human existence requires well trained, highly resourceful educators devoted to their own personal growth as well as the use of instructional material that addresses the whole learner; this material should also cover the needs of all students, including those with impairments.

For the holistic educator it is particularly challenging to manage a class where disabled learners are integrated with non-impaired peers without neglecting any group of pupils. In this study, the current situation of teachers catering for blind children in the mainstream English classroom is analysed and an alternative route to the braille transcription method –which lacks the motivational impact of the original textbook- is presented with a view to offering the

impaired pupils the possibility of learning a foreign language in a more holistic manner.

The next chapter is dedicated to the terms *visual impairments and blindness* and to the evaluation of the impact that these different eye conditions could have upon the child´s learning process.

2. The terms *visual impairment* and *blindness*

Visual impairment is an overall term that covers a wide variety of sight problems, ranging from severe *short-sightedness* to *tunnel vision*[4] or *cataracts*[5]. A person's vision is usually categorized in terms of *visual acuity*[6] –which involves distance and near vision- even though it represents only one aspect of sight which is not necessarily the most salient (Webster and Roe, 1998). Low vision might also result from disturbances of the visual field, loss of peripheral vision or other malfunctions unrelated to the ability of the eye to distinguish fine detail. In order to determine whether a child's sight is deficient or not, the following functions of vision are tested:

[4] The result of a severely reduced visual field often caused by a disease called *retinitis pigmentosa* (Arter et al. 1999).
[5] The clouding of the lens (Miller 1996)..
[6] Sharpness and clarity of vision.

a-Distance vision: The most commonly used method for measuring *distance vision* is the *Snellen chart*, which consists of a series of lines of letters arranged in decreasing order of size. Each line has a corresponding number indicating the distance at which the average eye is able to read that particular letter size. The last complete line that a person can read establishes his level of *visual acuity,* which is recorded in terms of numbers: the first one indicates the distance at which he is able to read a particular line on the chart, whereas the second is the distance at which the *norma*l eye reads that same line. As eye tests are usually performed 6 metres apart from the reading chart, standard *visual acuity* is recorded as 6/6.

Vision is classified as *moderately low* when the corrected better eye fails to read at a distance greater than 6 metres the letter size that the *normal* eye can read at 18 metres (6/18). Those people with a *visual acuity* below 6/60 but above 3/60 fall into the official category of *visually impaired.* For educational purposes this term is applied to those children whose learning is impeded unless modifications are made to teaching methods, materials and the learning environment (Webster & Roe 1998).

The term *blindness* refers to people whose *visual acuity* is 3/60 or worse and who depend entirely on tactile and auditory means of learning.

b-Near vision: Near vision is assessed by means of the *N Print* test, which starts with large print sizes that get progressively smaller. The standard eye reads an *N5 print* size at a distance of 25 cms. Visually impaired children with poor near sight use enlarged print, magnifiers and special lighting to perform their classroom tasks.

c-Vision field: The term refers to the amount of all-round vision – side and central- that a person has. A child with disturbances of the vision field can have difficulties scanning texts or maps for information or she might show marked clumsiness when performing physical activities if she suffers from poor peripheral vision.

A meticulous eye examination would cover other aspects of vision as well, such as colour discrimination, depth perception or binocular functioning.

Clinical assessment of vision does not always correlate to the child´s functional performance: some patients diagnosed as *severely impaired* function similarly to those classified as *moderate low vision*, or vice versa: for example, children with *cortical visual impairment,* in spite of having apparently healthy and normally functioning eyes, can behave as if they were totally blind.

It is not uncommon to find pupils suffering from the same eye condition who present varying symptoms and therefore require totally different teaching approaches. This broad range of individual differences may be due to a number of factors which greatly affect the development of the blind or visually impaired child: for example, the time of life when sight loss occurred is crucial, as the amount of visual experience before blindness affects the learning process. A person blinded after the age of 5 will have visual memories, which help develop inner representation of concepts and mental associations. Another important factor is the disease responsible for the impairment and the way it affects vision in the partially sighted.

Most visually impaired children have a complex visual condition which affect their performance in a number of ways. Some pupils who

perform reading tasks adequately might be unable to skim maps or texts for information, while others who need to have their learning materials adapted might cope confidently with physical activities such as games and gymnastics. Each pupil faces individual challenges, and most of them have to work harder than sighted peers to achieve the same standards, as reading and writing are often time-consuming, tiring tasks for people who suffer from *vision loss.* In addition, many of these children have to master other skills, such as orientation and mobility, using a range of adaptive technology or learning through touch using *braille*[7]*.* Teachers should therefore be aware of the specific factors affecting each child's learning process and approach them with a flexible attitude.

To sum up, the term *visual impairments* encloses a wide variety of individual cases with a wide scope of limitations and needs, and this renders the study on the learning process of this group of pupils difficult, particularly bearing in mind that researchers are usually

[7] A tactile system of writing and reading which is based on 6 raised dots. It is produced by means of a Perkins brailler, which has six keys that make the necessary dots or braille cells. Each letter is made from a combination of these cells.

forced to use small samples due to the reduced number of blind or partially sighted children with no additional disabilities[8].

The next chapter will focus on the role of vision in the acquisition of the mother tongue and the impact of blindness in language development according to contemporary scholars and educational experts.

[8] As a result of the increasing number of premature babies with very low body weight that survive, there are more and more visually impaired children with additional disabilities.

3- *Blindness* and first language acquisition

In this chapter the prevailing theories about the role of the senses –particularly vision- in cognitive development and first language acquisition will be reviewed.

There is sharp disagreement among researchers on the consequences of blindness upon the language development process: whereas some contend major differences between blind children and their sighted counterparts, others claim that their learning process is similar and occurs roughly at the same time. According to Pérez Pereira (1999), this disparity is largely due to the scarcity of quantitative data, which results in conclusions drawn from weak database or even single case approaches. There are great differences in the samples used, which in turn lead to different interpretations.

Another factor that may account for discrepant results involves the criteria used when designing experiments: some researchers assume that visually based systems play a crucial role in the development of the child, and then proceed to make predictions about the consequences of *blindness*. There is a tendency to foster a

negative view of the blind child's development, who is often considered like a sighted child with something missing. Researchers holding this view will measure the blind child's language development with assessments designed for the sighted which are ill-suited for children with *vision loss*. They thus fail to address language problems unique to the blind child.

On the other hand, some scholars believe that the role given to vision in cognitive development has been overemphasized. They claim that the processes of learning are flexible and therefore there is a fair amount of compensation when a sense is missing. In the absence of vision, strategies different to those favoured by sighted children are used for acquiring certain language abilities. In order to study the process by which young blind children acquire language, researchers should focus on the use these learners make of the senses that remain as well as on the function that language might have in their cognitive development (Urwin, 1984; Webster & Roe, 1998).

3.1. Cognitive development and early language

The study of blind children's cognitive development inevitably takes us to the classical philosophical and psychological issue on the origins and nature of human development; is sensory or perceptual experience essential to knowledge or are they separate processes? The empiricists (Locke 1690; Berkeley 1709; Hume 1758) believed that sensory experience played a central causal role in concept formation and therefore lack of vision would inevitably result in an experience of the world very different to that of sighted people. In the 20th century the piagetian tradition claims dependence between language and cognition, stating that emergence of language must be preceded by certain cognitive developments, such as *object permanence*[9], means-end relationships and capacity for representations (Brown 1973; Mac Mamara 1972; Slobin 1973).

[9] The understanding that an object goes on existing even when it is out of sight or touch.

As it is frequently assumed that blind children have difficulties acquiring knowledge of the external world and therefore in conceptual development, researchers often reach the conclusion that blind children's language acquisition will deviate from the normal path. Their language is said to be egocentric and self-centred, mechanical and unanalysed. Cutsford (1932; 1951) coined the term *verbalism* to describe the language used by the blind not verifiable by concrete experience. He sustained that people with no sight suffered from a *verbal unreality, which* resulted in incoherent and loose thinking.

Fraiberg (1977) claimed that the experiential poverty of the blind infant causes a delay in his or her language development, as he has nothing equivalent to the sighted child's rich *picture bank* which enables him to classify, recognise, name and retrieve images in memory. Thus, the blind child is forced to take a long circuitous route in order to construct a world of objects and to attribute actions and qualities to persons and things. According to her, vision plays a crucial role in the symbolic representation of the self and therefore *pretend play*[10] and the acquisition of personal pronouns –which are

[10] Also called *symbolic play*, whereby the child uses an object as if it were something else (i.e. a banana is used as if it were a telephone). It is said to be associated to the development of representation.

closely related- are delayed in blind children. Consequently, whereas a typical two year old is capable of endowing a doll with imaginary life, the blind child will take approximately another 2 years to reach this stage, which immediately leads to a creative use of the personal pronoun *I*.

Dunlea (1989) advocated important differences between blind and sighted children's early language. She concluded from her sample studies that blind children's words remain tied to their original context for a much longer period of time and that their speech is basically egocentric, as they tend to speak about themselves and their own actions with rare references to others or their activities. She pointed out that blind children often use language mechanically and non-creatively, as their lexicon contains very few overextensions or idiosyncratic forms and they tend to be language reversers. She postulates that blind children engaged in early word meaning acquisition will necessarily have different referents to which they extend an original word to those of their sighted counterparts, as the features they find salient -and which form the basis of their lexical constructions- must necessarily differ; whereas sighted children are more likely to focus on shape and movement, their blind peers will

pay greater attention to texture, weight, taste and sound. Dunlea contends that while overextensions can be found in both groups, the blind will rely excessively on non-visual features and thus misapply terms for a longer period than sighted children. According to her, the blind group will tend to find greater difficulties in adapting to standard adult language usage.

3.1.1. Blindness and the piagetian model

Swallows (1976) applies Piaget´s theory to study the cognitive development of blind children and concludes that this group lags behind their sighted counterparts in all four stages[11], as well as in their assigned factors: *maturation*, *learning*, *social education* and *equilibration*. She contends that absence of vision often causes delays in locomotion and prehension as a result of lack of stimulus to explore surroundings, which in turn affect the development of the two types of learning experience according to Piaget, namely, *physical knowledge* (getting to know the properties of objects) *and logical mathematical knowledge* (knowing the functions and means of objects). She affirms that social development is also affected by a

[11] The piagetian stages of mental development are: the sensorimotor stage (0-2 years old); the preoperational stage (2-7 years old); concrete operations (8-11 years old); formal operations (11+).

child's absence of sight, as *blindness* causes greater dependence on the mother figure and deprives the child of good modelling behaviour, to which vision is crucial. Therefore, in her view, the blind child inevitably lags behind her sighted peers in cognitive development.

In contrast, some authors argue that these delays in Piagetian tasks are not due to conceptual inabilities of the blind children but to the importance of visual experience in the concepts that are being tested. They claim that once the experimental conditions are adjusted, blind children show no delays in acquiring these cognitive skills (Webster & Roe, 1998).

According to Ochaita (1993), the blind child lags behind the sighted, but only up to the *concrete operation* stage. During adolescence the pupil gains access to a hypothetical-deductive verbal form of thought and therefore the differences which separated him from his sighted peers disappear. She argues that people with *visual loss* use alternative routes to cognitive development. Once the child reaches the stage of formal thought, he or she is able to overcome many of the figurative problems caused by lack of sight. She contends that the development of the blind child can be better

explained by vygotskian theories –which give great importance to the role of language in the development of the higher psychological processes- than through the piagetian model, where the role of language in cognition has been underestimated.

3.1.2. Cognition through sight, touch and hearing

Some scholars who claim differences between the cognition systems of the blind and the sighted argue that the quality of information derived from the sense of touch is not similar to that gained through vision. Sight, being a simultaneous and continuous sensory system, gives immediate information on parts and wholes, whereas touch and audition are sequential and therefore need a narrative type of cognition to extract holistic meaning. The cognitive schemas derived from narrative analysis of sequential information in touch and hearing are necessarily different from those derived from part-whole processing (Fogel, 1997). In contrast, Anderson & Olson (1981) argue that tactually gathered information can compensate for visual deficit, as object concepts gained by touch do not differ significantly from those of the sighted. They even suggest that sighted children might be using tactually gathered information for conceptualisation of

objects to a greater extent than is usually admitted and that the role of vision in cognitive development might be overemphasized.

Locke (1997) contends that sound carries very rich information about the physical world which, while the average sighted person does not usually register consciously, the blind are more likely to be sensitive to; thus, it is possible to deduce certain things about the speaker –such as his facial gestures or body size- by the the quality and tone of his voice.

3.1.3. *The role of parents and other social partners*

A number of studies on the development of blind children focus primarily on their rapport with parents and relatives and how their learning process can be promoted or hindered by these relationships. Lucerga (1998) argues that many of the problems and delays found in the cognitive development of these children can be prevented by means of a good early intervention programme, where parents are helped in their initial shock of having a handicapped child as well as taught to understand their infant's body language (in some respects different to that of their sighted counterparts). If parents establish a good rapport with their children and learn to stimulate them

adequately in order to compensate for their lack of vision, there is no reason why a blind child should not develop satisfactorily. She talks about *adaptive delays* in early infancy which tend to disappear around the age of 4 or 5.

Priesler (1997) contends that many problems associated with blindness are related to the children's social partners. She affirms that there is usually a mismatch between the representational systems of parent and infant, as parents tend to be excessively directive when speaking to their blind child. She urges parents and educators to try to change this relationship so as to reduce this problem-causing mismatch.

Kekelis and Prinz (1996) concluded from their study that blind children produce considerably fewer utterances than their sighted counterparts. They registered and analysed the language that the parents of both groups used with their respective children and found differences that could account for the blind children's poor performance. The sighted received many more real questions than their blind peers, whose mothers tend to ask them knowledge-testing questions, which do not encourage conversation. According to their

results, blind children's mothers spend considerably more talking time in their conversations with their offspring than the mothers of their sighted counterparts.

Urwin (1983) suggests that some of the alleged peculiarities of blind children's language –such as their reduced active vocabulary and rare references to other people's activities or to absent objects- could partly be explained by the interaction with their parents, who tend to focus their conversation on the child himself and on the objects within his reach. Mcginnis (1981) underlines the importance of the attitude of parents, relatives and educators towards the child's impairment: parents who hold lessened expectations on the child can deter his or her development; for example, anticipating their daughter´s wants can diminish her motivation to communicate and therefore decrease her verbal output.

In some researchers view, eye contact between mother figure and infant plays a crucial role in the development of *preverbal communication*, the stepping-stone of the emergence of language. However, Urwin (1983; 1984) has concluded from her field work with mothers and their blind infants that sight is not indispensable, as

parents tend to find alternative non-visual communication systems – through the senses of touch or hearing- which enables the child to develop early language equivalent to that of the sighted.

3.2. Blindness and autism

Blindness has often been compared and contrasted with autism. Some authors contend that many congenitally blind children share certain characteristics with their autistic counterparts, such as problems in *pretend play, pronoun reversals*, *echolailic speech*[12] and frequent and apparently incoherent questions. Hobson (1993; 1997) claims that lack of vision can hinder the development of a *theory of mind*[13], as sight greatly contributes to the child's awareness of other people's stance towards objects and events different to his own. This triangularity child/ adult/ external reality is crucial for the construction of the self. It allows for cognitive advances to take place, and triggers off the emergence of reflective thought.

[12] The use of words in a parroting fashion, without having understood their true and complete meaning (Nagera and Colonna 1965).
[13] The ability of a person to impute mental states to self and others and to predict behaviour on the basis of such states (Leslie 1987).

It can therefore be concluded that, for very different reasons and following unconnected routes, blind and autistic children can both show difficulties in developing an image of the self, other selves and the external world. However, this point of view finds strong opposition: researchers who have focused their studies on the alternative routes to cognitive development as compensatory mechanisms have concluded that most of these autistic-like features supposedly present in congenitally blind children are not necessarily extendable to the whole blind population and that some of them are just adaptive strategies necessary for their alternative learning process. Brown (Brown et al 1997) claims that blind children who show autistic-like behaviour tend to have very low IQ´s and therefore these features are probably related to some unassessed deficiency and not to *blindness* itself.

3.3. The role of syntactic information in language development

An increasing number of scholars contend that cognitive development is not necessarily affected by blindness, as the meaning of words can be grasped without direct sensory experience thanks to the syntactic information that children are able to process.

Landau (1997) argues that blind children have no difficulty learning the syntax of their native language and that verbs, nouns and their morphology and syntactic frames are acquired with very few anomalies, as meanings are not based on visual experience. Certain aspects of the meanings of nouns and verbs are linked to the syntax and therefore can be acquired through knowledge of language itself. For example, the child uses certain cues to identify nouns, such as the knowledge that they are preceded by determiners or quantifiers, or that they are common names, and not proper names, when preceded by an article. The meaning of verbs is acquired by determining which syntactic frames go with each verb. Landau underlines the significance of syntactic information in the acquisition of word meaning for all children, both sighted and blind. From her single case study with a congenitally blind girl, *Kelli*, (Landau, 1983) she refutes the notion that blind children's speech is formulaic and that they use terms referred to sight in a meaningless way. *Kelli* used the verbs *to look* and *to see* in a very logical way: whereas the former meant *to explore with the hands*, the latter described mere physical contact.

Pérez Pereira and Conti-Ramsden (1999) argue that certain features often present in the language of the blind child –such as stereotypic speech, imitations and repetitions- which have been labelled as aberrant, can be part of a strategy of learning that fits more into the *gestalt* or *holistic* style [14]of language acquisition than into the *analytic* style[15]: the child first uses the structures whole and then proceeds to analyse them, introducing variations in the model utterance. Thus, these memorised sentences would be used as frames within which to practise certain grammatical structures.

[14] The child acquires multiword units that function like single words in the early stages of language learning; later he will analyse and segment those unanalysed chunks, thus moving on to an analytic mode. At the beginning language is inflexible and lacking in creativity. It becomes increasingly complex as the child recombines those prefabricated patterns (Prizant 1984).

[15] In this mode of learning the child moves from single words to two and three word utterances that encode early semantic functions and relations. Development furthers when the child acquires grammatical morphemes and functors and is therefore able to elaborate noun and verb phrases (Prizant 1984).

Some researchers have had the opportunity to follow the language development process of a pair of twins, one of them blind and the other sighted[16]. Anne Sokolow´s case study in 1978 was highly controversial, as it challenged the prevailing psychological and linguistic theories of the time, which assumed that a blind child's language would necessarily show certain deficiencies: Sokolow concluded that the blind twin was ahead of her sighted sibling in language development, thus suggesting that a child's need to compensate for vision loss might drive her to a greater reliance on language.

Pérez Pereira and Castro (1992) also studied a pair of blind and sighted twins during their early language development period; they detected some differences in their use of language which they attributed primarily to the blind child's choice of an alternative route of learning to accommodate her lack of vision: although she seemed to pay more attention to the formal properties of language and used a greater number of ready made utterances in a repetitive fashion, she nevertheless practised variations with these structures in a sort

[16] As twins are often born prematurely, it sometimes happens that the smallest one spends a long time in the incubator and is blinded as a result of over-exposure to oxygen.

of verbal play. Her *mean length utterance* was longer than her sighted sister´s, which some researchers could interpret as evidence of greater structural complexity; however, it was most probably due to her use of certain strategies such as *imitations* and *routines.*

Pérez Pereira and Castro concluded that the sisters´ differences were basically caused by the blind child's adaptive use of language and that the twins were taking varying routes to get to the same destination. They contend that absence of sight does not hinder the child from normal linguistic development and therefore a mechanism that compensates for lack of visual information must exist. They suggest that linguistic information is used by blind learners to a greater extent than their sighted counterparts to compensate for their deficiency.

To conclude, there is no agreement among researchers on the prevalence of speech defects on blind children, as highly divergent results have been drawn from studies. These discrepancies seem to be partially due to the scarcity of quantitative data, which in turn is a consequence of the small numbers of blind children with no additional disabilities available for case studies. Samples are therefore very

likely to differ greatly from each other, which would account for the divergent conclusions drawn from them. Another important factor which could be responsible for this disparity of results is the criteria by which children are assessed. It seems advisable to avoid tasks that were designed for the sighted, as they are usually not well suited for the blind and lead towards a misunderstanding and underestimation of their performance.

Up to the 1980´s the tendency was to consider that blind children are at a disadvantage in language learning compared to their sighted counterparts: However, nowadays the view on the blind child's development seems to be more optimistic; the educational authorities of most western countries believe in investing considerable amounts of financial and human resources in *early intervention* programmes and a network of vision teachers and special education experts that render possible the integration of the vast majority of blind and visually impaired pupils into the mainstream school system.

In the next chapter I shall explore the current educational options for blind and visually impaired children in Spain: the

advantages and disadvantages of integrated settings versus *special schools*, the infrastructure provided by the Spanish Educational Authorities and the O.N.C.E[17] to regular schools who cater for pupils with vision loss, and the main problems that these children face in an ordinary educational setting.

[17] Organización Nacional de Ciegos Españoles, Spain's main organization for the blind.

4. Educational options for blind and visually impaired children in Spain

This chapter will focus on the current educational opportunities for pupils with vision problems. Although I will be referring specifically to Spanish children, the situation is very similar in most western countries

The tendency to integrate pupils with *impairments* or *learning difficulties* into the mainstream school system is a very recent affair. Until the 1970´s, children with psychic, sensory or motor disabilities would automatically be placed in *special* schools catering for their particular handicap. In the case of pupils with visual problems, they would be sent either to a school for the *blind* or to a school for the *partially sighted*, depending largely on the ophthalmologist's assessment of their vision.

The United Nations General Assembly's promulgation of the rights of disabled people in 1975 triggered off a movement against segregation and towards a new educational philosophy which advocated the integration of *all* children in ordinary school contexts. The present trend is to blur boundaries between groups formed on

the basis of categories of vision and to place children attending to their individual needs and circumstances.

Spain's major organization for the blind (Organización Nacional de Ciegos Españoles: O.N.C.E) has played a leading role in the education of blind and visually impaired children ever since it was founded in 1938. Until 1983 it ran five residential schools for the blind located in Madrid, Seville, Alicante, Pontevedra and Barcelona. These schools´ academic standard was ranked highly not only compared to other *special education* institutions, but also to mainstream or private settings.

However, the Spanish Constitution (1978) brought forth important changes in the country's educational policy by establishing the right of citizens with disabilities to a full integration into society. The 1982 Educational Act stipulated that disabled children should receive an education essentially identical to that of their so called *normal* peers and that therefore the *special needs* of most pupils would be met in mainstream schools, the *special* schools being reserved for those children with extremely complex learning difficulties. In 1985 a decree on *special education* established the

general guidelines to follow with disabled pupils and assigned certain resources to *special educational needs.* This policy was developed in greater detail in 1990 (Ley General de Ordenación del Sistema Educativo LOGSE) and in 1995 (Real Decreto de Orientación de la Educación). A number of guidelines were set to be followed by the Educational Authorities concerning the identification and assessment of pupils with *special needs*, ranging from exploring the nature of the difficulty of the disability to making detailed individual plans and periodically reviewing the effectiveness of the chosen approaches.

Mainstream schools have a designated *special educational needs* coordinator who shares the responsibility –together with subject teachers and relevant outside support services- for the arrangement of the pupil's learning difficulty assessment, teaching targets and progress review.

In matters of visual loss, the O.N.C.E has worked very closely with the Spanish Educational Authorities, as it provides considerable human and financial resources for the education of blind and visually impaired children in both mainstream and *special* school settings. In the 1980´s the O.N.C.E´s residential schools became educational

resource centres, which apart from offering a full academic curriculum for those blind pupils who choose a segregated setting, they provide a number of services and programmes: there are Early Intervention Units attached to them that cater for children aged 0 to 6, where parents are helped to cope with their child's impairment and infants are taught to make optimal use of their remaining senses and to move with autonomy. The resource centres also offer visual rehabilitation programmes for people with useful residual sight; they have a day and boarding centre for blind children and youths with other disabilities; they also hold a Resource Producing Unit where teaching materials and textbooks are adapted to meet the needs of their affiliates, and last but not least, they play an important role in the organization and co-ordination of integrated education for children with *visual loss*: they train educational specialists in *blindness* and *visual impairment* as well as provide a peripatetic support service which is essential for the good functioning of the integrated school setting.

Parents of children with *visual impairments* have the following educational options: they can send him to a *special* school, either as day or boarding pupil -depending on the location of the family's

residence and the child's particular social and emotional needs- or they can opt for a private or public school in the mainstream system. They usually make their decision under the guidance of a mixed team of professionals from the Educational Authorities and the O.N.C.E, who will explain in detail the advantages and disadvantages of each placement, basing their advice on the child's needs and characteristics. In general, visually impaired children with no other disabilities will be urged to attend a mainstream school, as the current trend is to place academically able students in this type of setting. It is said to favour social integration –It allows the child to live with his or her family and make friends with local sighted peers- as well as to offer her wider academic possibilities. In contrast, there is a general moveaway from *special* schools, which are generally recommended when it is considered that the child's communication and mobility needs, together with specialised teaching requirements, would not be met in an ordinary school. A segregated setting usually offers a protective, small scale environment with a high teacher-pupil ratio and well qualified, fully committed staff, which would be adequate for a child who is socially or emotionally immature or has complex learning difficulties (Guinea i Comas & Codina Mir 1986; Herranz Tardón & Rodriguez de la Rubia 1989)..

Even though there is a climate of opinion that favours the integration of impaired pupils in mainstream schools, this option is nevertheless complex and its good functioning depends on a number of factors: The child is often the only *special one* in the classroom and might suffer from being singled out; groups are sometimes too large[18] and disruptive for the subject teacher to be able to meet the child's individual needs; the school staff might feel overloaded with work, and therefore could be unwilling to receive additional training or to spend enough time adapting their teaching materials.

In the case of Spanish visually impaired children attending mainstream schools, they are usually monitored by the school's *special educational needs* co-ordinator together with an assigned peripatetic specialist teacher from the O.N.C.E, who assess and help the subject teachers to accommodate the child to the classroom as well as establish specific targets for each particular child.

[18] Although groups with pupils with *special educational needs* are supposed to have a ratio of 25 pupils per teacher.

The specialist teacher's degree of involvement varies significantly, depending on each child's needs. In moderately *low vision* cases, they might just play an advisory role; with the more severe cases they could have to monitor appropriate modifications to the learning environment, adapt teaching materials or teach the child directly. Partially sighted children usually require magnification aids and task lighting for their work base, which will be provided by the O.N.C.E upon the recommendation of the visiting teacher; they will also need to have certain materials -such as diagrams and other visual resources- adapted to be high in contrast and with a limited amount of information in each diagram. Sometimes it is part of the peripatetic teacher's remit to work on aspects of the child's literacy. With *educationally blind* children she will have to work intensively at a primary school stage, as teaching might include safety awareness, providing appropriate verbal input and other aspects of general education that promote access to the school curriculum.

At a later stage, duties might include teaching them to read and write braille, transcribing all materials requested by the subject teachers into braille and the setting and correcting of exams, which requires close co-ordination between both professional educators.

The peripatetic specialists often act as informants to the mainstream teachers in matters such as the nature of the child's eye condition and the implications for teaching and learning, the levels of achievement that can be expected in the different areas of the curriculum, ways of modifying environmental conditions etc. The frequency of their visits varies greatly from school to school, ranging from a couple of times a term to several days a week, as required by each child's particular needs.

According to Linares (1993) there are three modalities of integration in the Spanish educational system: when there is *full inclusion* the child spends all his time in the ordinary classroom, but he might at times work on an individual basis performing tasks that involve specific skills while the rest of the class is engaged in other activities. *Partial integration* takes place in schools provided with Special Education Units, where the impaired child spends part of his

school time working with the specialist teacher to reinforce certain skills according to his individual educational programme. *Combined integration* refers to a mainstream school with a resource base attached to it which caters for a particular disability: in this modality there is a certain number of children with the same handicap, so the school will have more resources than other settings, as well as highly specialised and experienced permanent staff. The children with *special needs* join their non-impaired peers in some school activities.

From a survey addressed to Spanish mainstream teachers, peripatetic specialists and blind and visually impaired children attending regular schools in order to evaluate the integrated system in Spain (Salinas Fernández et al 1996), researchers concluded that the main problem lay on the staff´s lack of training in *special education*. Some teachers stated that their schools did not provide the means, resources and support necessary for the successful integration of an impaired child; they complained that they knew very little about *blindness* and felt very insecure about the physical safety of the child in the classroom. They also reported that they felt overloaded in the current educational climate and showed little willingness to invest too much time in preparing additional material.

They found it difficult to plan activities where the visually impaired child could join in comfortably without affecting the pace of the class. Some of them felt that the presence of a blind pupil made them lose a certain amount of class management, as they tended to spend too much time attending to the child individually.

Most teachers suggested that the Educational Authorities should provide more in-service training on different aspects of special education.

There is, nevertheless, a growing awareness concerning this inconsistency in the system and therefore the opportunities for teachers to receive additional training in *special educational needs* have increased in recent years.

To sum up, the current trend in Spain –like in the rest of the western world- is to place blind and visually impaired pupils in mainstream settings, as this educational option is thought to provide greater opportunities for social integration as well as ensure that the child is exposed to the same academic standards as his sighted peers. However, despite the human and financial resources assigned

to mainstream schools catering for children with *special needs*, the system is far from perfect and certain difficulties inevitably arise: in some cases, the child needs greater attention than what the mainstream setting can possibly provide; in others, schools unload all responsibility on the subject teachers, who feel that they lack the necessary training to cope with impaired pupils. In addition, certain school subjects are taught mainly through visual aids and it is difficult to adapt these teaching materials for pupils with *visual impairments*.

In the next chapter I will review previous research on second language acquisition in blind people as well as analyse the main difficulties that young learners with vision loss -and their teachers- encounter in the English Classroom.

5. *Blindness* and second language acquisition

There is a dearth of material in the field of *second language acquisition* for learners with visual impairments, probably due to the generalised assumption that these students follow the same patterns of learning as their sighted counterparts; provided there is reasonable competence in the mother tongue, a second language will be learned successfully, as literacy skills transfer across languages (Cummins 1984). Nevertheless, some scholars insist that there is great need for further work in this area, claiming that there exists no evidence to prove that the blind and the sighted follow the same route when acquiring a foreign language (Guinan, 1997).

I will not address this issue in depth, as it would require extensive research in an area which is beyond the scope of this study. However, blind pupils are generally reported to acquire a second language through the same methods as the sighted showing little difference in their learning process.

This chapter begins with a review of the research done on second language acquisition in blind learners, followed by an analysis of the problems posed by current modern language teaching practice in mainstream classrooms with blind and visually impaired students.

5.1. Review of the literature

Presumably the first article ever published about *blindness* and foreign language learning was written by a blind teacher called Morrissey in 1931. It was his contention that blind people are particularly well equipped for foreign languages, as their impairment forces them to develop their ear to a much greater extent than the average sighted person; he considered language learning to be fundamentally a matter of the sense of hearing with very little or no relation to vision, and therefore assumed that a well trained ear guarantees success in mastering a foreign tongue. Morrissey regarded foreign language teaching as a feasible, most appropriate profession for blind people.

The second oldest article on this subject was written by Flood (1934), who contemplated the possibility of applying a mainstream

syllabus to schools for the blind. However, he concluded that the low reading speed inherent to the braille system would inevitably slow down the learning pace of the blind students.

There is hardly any more literature on this subject until the 1960´s, when the *Office of National Rehabilitation* of the United States decided to launch a programme to train blind and visually impaired students in languages. Georgetown University was chosen as location for this special experimental course for its well known Institute of Languages and Linguistics. It was decided that the project would be monitored by the *Georgetown Research Centre* and that the blind and visually impaired students would be taught separately. Course participants, who had been carefully selected from all over the country, were exposed to the target languages –Russian and German- an average of 40 hours per week. The method used was *aural-oral*, whereby the students should gain a good command of the language sound system before being introduced to some basic vocabulary and to the grammar. The course, which involved a lot of self study in the laboratory, included reading and writing of Russian

braille and use of the *cyrillic*[19] keyboard. The project –which was considered a success- qualified its participants to work either as simultaneous interpreters or as teachers of Russian or German in *special* schools as well as in mainstream settings, thus opening a field of significant activity for the *blind* (Dostert, 1963; McDonald, 1966).

The Catholic Guild for the Blind in New York City also opted for the then fashionable *oral-aural* method for their *English as a Second Language* programme, which started in 1968 to serve their foreign clients. The students were not introduced to the graphic symbols of English until the teacher felt that they were well acquainted with the oral patterns of the language. This programme included the teaching of gestures and facial expressions to help the students cope with social and professional situations that they might encounter in their new country. Kesselman and Snyder (1972) claim that the teaching material they used needed surprisingly little modifications: they just substituted some of the flashcards by tactile stimulation and adapted the contents of a number of standard lessons so as to include useful mobility information. It is their contention that blind people –both educated and uneducated- possess an exceptional ability to learn

[19] Script used for the writing of Russian and other Slavic languages.

foreign languages, which they attribute to their additional aural sensitivity as well as to the intensive memory training that they undertake as part of their general rehabilitation programme.

However, the success of both these projects could be due to certain factors which are unrelated to the students´ *blindness*. In the case of Georgetown University, course participants had been carefully selected from all over the country, so presumably they were highly educated and talented for languages. *The Catholic Guild for the Blind* catered for immigrants who had decided to settle in the United States and were therefore in great need to master the English language. It can be supposed that their incentive to learn was far greater than that of a person studying in his home country.

Marshall´s view on the subject of teaching English to blind students is less optimistic: he claims that selecting and adapting class material is a hard, time-consuming task which involves a great deal of additional lesson preparation. This is particularly true for school teachers, who have to provide the children with a wide range of experiences and real life situations: if blind pupils are to learn a language in a meaningful context, they must be exposed to a variety

of objects which they can touch and which fit into each particular lesson plan (Marshall 1968)

In the 1980 the enthusiasm for the *oral-aural* method faded off and gave way to a concern for the literacy component of learning a foreign language. Nikolic (1986) underlines the importance of an adequate adaptation of the instructional material. In his view, adapting material means changing it in order to compensate for absent or deficient sight by promoting the use of the remaining senses, and not –as some educators mistakenly think- making an adjustment for mental development. He points out the importance of fluent reading and writing in mother tongue braille if the student is to progress satisfactorily in the literacy skills of the target language. Braille´s basic phonic structure translates across most language codes, so proficiency in braille is transferable from first language into English. However, even though it is a world wide system, there can arise problems with the so-called *double braille symbols*[20], which often mean one thing in the mother tongue and something quite different in the foreign language. This is, nevertheless, usually a

[20] As a code, Braille is a mixture of letter for letter transcription (Grade 1) and a series of abbreviations (Grade 2) which do not mean the same in every language.

simple matter, as it only concerns specific letters. The main problem lies on the fact that reading braille is a more difficult, slower process than reading print, which renders the teaching of intonation and rhythm through a textual approach rather difficult. Thus, certain mistakes in pronunciation will inevitably be made due to the fact that the blind student is not able to identify early enough the words that follow (as would be the case with the definite article, for example). Nikolic suggests courses on speed reading in mother tongue braille, where students are taught to use both hands more actively.

Nikolic sees great professional potential for blind people in the area of foreign languages, as he contends that they often display a marked talent for learning other tongues, probably due to their aural sensitivity and intense memory training. He endorses the teaching of modern language to students with *visual impairments* entirely within the framework of the curriculum in mainstream education.

In Guinan´s view (1997), visually impaired students have needs which are quite different to those of their sighted counterparts, and which have been systematically ignored. Courses developed for these students have failed to pay due attention to the interrelatedness of the four learning skills by neglecting or delaying the literacy component of a foreign language. She criticizes the *oral-aural* method for *mistakenly* assuming that the student must master the speaking and listening skills before reading and writing are tackled, claiming that this *misplaced* emphasis is not so much a question of current foreign language teaching practice but a consequence of modern language teachers´ lack of knowledge of braille. Little exposure to the written word inevitably results in poor spelling, which in the case of English is one of the most difficult skills to master -for the sighted students as well as for the impaired-. Guinan insists on the convenience of having teachers who are trained both in EFL and in the education of visually impaired children. However, this would hardly be feasible in a mainstream context, where teachers often tutor pupils with different *special educational needs* -ranging from a blind child to a Down syndrome or a cerebral palsy case- and therefore cannot be expected to fully specialize in any particular disability.

To sum up, researchers of *second language acquisition* by blind learners generally agree that these pupils display the same aptitude for learning foreign tongues as their sighted peers- and some of them contend that, owing to their superior aural sensitivity and intensive memory training, blind students tend to be more talented than average-. However, they often encounter two serious difficulties, both unrelated to their learning capacity: the first one concerns the adaptation of the instructional materials –which nowadays tend to be highly visual- and the other one derives from insufficient knowledge of mother tongue braille, which would affect the learners´ reading and writing skills in the target language. Presumably this last difficulty could be overcome by improving his level of braille or by recruiting teachers specialized both in EFL and in braille, which would be feasible in segregated settings only.

5.2. TEFL and visual impairments

Teaching a foreign language in a segregated setting should not pose any particular problem, as teachers are qualified in EFL as well as in the education of the visually impaired and the teaching techniques can be carefully adapted to reduce or substitute the visual information of EFL instructional materials.

A mainstream system is, however, a very different matter. Modern language textbooks are highly visual: their colourful, cluttered and confusing layout renders it very difficult to adapt for a visually impaired child. Moreover, foreign language teachers hardly ever get in-class support and therefore tend to feel overwhelmed by the extra work necessary to accommodate a blind child to the regular classroom, which often exceeds 25 pupils.

Young learners with *visual loss*, just as their sighted peers, can acquire language naturally, and therefore should be exposed to experience rich, task-based activities focusing on meaning rather than on form. Current foreign language teaching practice endorses the principle of maximum target language use in the classroom, although there are discrepancies concerning the extent to which this

use is feasible or desirable. Many teachers find it very difficult to ensure understanding, even with a class of fully sighted pupils, in spite of the repertoire of visual cues -such as flashcards, mime, gesture, attractive symbols and reminders displayed on the walls-. They often resort to using the children's mother tongue to prevent the class from becoming disaffected and disruptive, which is usually the case when pupils do not understand a reasonable amount of what is being said.

For children with *visual impairments* it is particularly difficult to follow an EFL class where the target language is used extensively, as meaning is often conveyed through visual aids. Some teachers recommend substituting pictures by three-dimensional toys and models of everyday items for the blind child to touch, but this activity is said to slow down the pace of the class considerably. Other teachers have opted for group work, where the sighted pupils interpret visual cues for their blind counterparts: However, children talking among themselves tend to use their mother tongue, so code switching is not avoided. Moreover, it is sometimes argued that this sort of activity can interfere with the blind child's independence process.

In a mainstream class with no support teacher, a blind pupil usually has to cope with the braille version of a visually attractive, very *busy* textbook, which has lost all the motivational impact of the original. In addition, he will take much longer than his sighted counterparts to work through this material, not only because braille reading is slow, but also because it includes a detailed description of the complicated illustrations from the textbook. Pupils often find the taped versions less tedious, but they reduce the child's exposure to the written word, thus affecting the development of spelling strategies. This is a serious drawback if the foreign language happens to be English, whose written and spoken forms show little resemblance.

The philosophy behind the full integration of pupils with *special educational needs* in mainstream schools endorses the right of these children to totally equal opportunities to those enjoyed by their sighted classmates. There is, however, a lot of discrepancy about the real, palpable results of this educational experience, which for most countries started under 20 years ago.

In 1995, a survey was sent to 89 British educational establishments –*special* schools as well as mainstream settings- catering for students with visual impairments to discover how pupils and educators felt about the National Curriculum in modern foreign languages (Gray, 1997; 1998). Most of the institutions that answered were mainstream schools with a *resource base*. The general conclusion from this survey was that a lot of work still needed to be done in Britain if students with *visual impairments* were to enjoy equality of opportunity in the area of modern foreign languages: the prevalence of visual instructional material hampers the learning process, as it is hardly ever adapted to be enjoyed by the sense of touch, which would be the only way to maintain its motivational impact. Visually impaired pupils heavily depend on a good understanding between their mainstream and specialist teachers for a timely, well thought out adaptation of their textbook; in addition, these students do not have access to the same wide range of materials and support for incidental learning that is usually available to their sighted peers, such as magazines, comics, videos and films. Last but not least, braille reading is slower and more difficult than print, so they usually have to put in extra homework time if they are not to lag behind.

To the best of my knowledge, no survey specifically covering the area of modern foreign languages has taken place in Spain so far; however, in all probability Gray´s conclusions could be extended to Spanish schools too.

To summarize, little research has been done on the acquisition of foreign languages by blind and visually impaired students, probably because there is no evidence that their learning process differs in any way from that followed by their sighted counterparts; some authors even contend that blind students are often more talented for language than average, due to their memory training and aural sensitivity. The problem arises when foreign languages are taught in mainstream settings, as current instructional material tends to be highly visual and it is difficult to adapt adequately for blind learners.

The next chapter focuses on the Spanish National Curriculum in modern languages and how it is applied in mainstream schools that cater for children with vision loss.

6- The integrated English classroom in the Spanish mainstream school setting

This chapter opens with a description of the philosophy of teaching underlying the Spanish National Curriculum in foreign languages; I then proceed to explain how it has been put into practice in mainstream schools and the difficulties that the *highly visual* current teaching material poses on learners with *visual impairments*

6.1. The National Curriculum in foreign languages

The current Spanish National Curriculum in foreign languages is inspired in nativist theories of second language acquisition, which were developed in the 60´s, 70´s and early 80´s, and more particularly in Krashen´s *Monitor Theory* ant Terrel´s *Natural Approach*. Thus, it endorses the idea that language can be *acquired* as opposed to *learned*; in other words, students can master a second language by means of a subconscious process which is basically identical to that involved in first language acquisition and which does not involve conscious learning of formal rules. Priority is given to

producing students who are communicatively competent, that is to say, able to use the target language appropriately in exchanging information with a native speaker. Thus, activities aimed at developing the pupil's communication skills are particularly encouraged, above all at the first stages of language learning, when children need plenty of exposure in order to get used to first hearing, then recognizing, understanding and finally using the target language. Second language acquisition is viewed as a process of creative construction where learners use context, together with their previous knowledge, in order to discover meaning.

As the National Curriculum assumes that the pupil employs the same *natural* strategies to learn a foreign language she used when acquiring her mother tongue, it therefore recommends the teaching of the target language through task-based activities, which involve communicative language use where the pupil's attention is focused on meaning rather than on linguistic structures. In this sort of activity, language is regarded as an instrument for the accomplishment of the task. Learners are involved in comprehending, manipulating, producing or interacting in the target language paying little attention to form, a situation which resembles a natural learning environment.

A child's attitude to languages will greatly influence his learning process, and therefore it is crucial to create a positive orientation by the use of interesting activities that he can relate to. Likewise, the contents of the lessons should be meaningful, stimulating and connected to other school subject areas, thus contributing to the *holistic* development of the child.

The National Curriculum urges teachers to work with authentic material from communities that speak the target language, as experiencing the products of different countries is thought to increase the child's cultural awareness.

This *communicative approach* to language teaching views the student as the main protagonist in the process of learning. Pupils are primarily involved in the task of communicating and therefore many activities are carried out as group work in order to maximize their opportunities for communication. The role of the teacher is that of facilitator of the pupils´ learning: she supplies the linguistic information that the class requires, she organizes and manages activities and games, acts as adviser and is at times co-communicator

with the students. Thus, the learning in the classroom becomes more student centred, which encourages the development of *learner responsibility* and *learner independence.*

Errors are accepted as part of the process of learning; priority is given to communication and fluency and therefore correctness of form is less important.

Evaluation takes place mainly through communication activities: pupils´ progress is assessed according to their ability to get their messages across in the target language

In a nutshell, foreign language teachers are supposed to facilitate their pupils´ learning in the most *natural* fashion possible by exposing them to spontaneous speech in the target language, helping them to acquire meaning through stimulating teaching aids and enjoyable activities and familiarising them with *authentic material* – such as comics, books, magazines, films etc- from the communities where the language is spoken. This is often a rather challenging task when a class exceeds 25 pupils -which is often the case in state schools- particularly if there are learners who have *special*

educational needs: teachers often have to resort to the children's mother tongue to ensure understanding; group involved in oral activities sometimes become disruptive or disaffected and to use authentic material with a class of young learners requires careful planning and adapting on behalf of the teacher.

However, one of the main advantages of teaching a foreign language to young learners is that the textbooks and teaching materials are highly attractive with colourful, busy illustrations on subjects that particularly appeal to their age group and full of stimulating activities related to art, music and drama. Thus, the children might –or might not, depending on their teacher's competence- learn a lot in the English classroom, but they usually enjoy themselves to some extent if they are sighted. It is, however, a very different matter for a child who is blind or suffers from a *visual impairment*, for current modern language textbooks rely almost totally on the sense of sight.

6.2. Modern language textbooks

The Educational Reform of 1985 established that foreign languages would be introduced in the curriculum of Spanish schools on the first year of the second cycle of primary education, officially called 3rd grade of primary education.

This study basically focuses on children aged 8-11 enrolled in the second cycle of primary education and therefore the textbooks that I will analyse are those used in the 3rd and 4th grade.

The main foreign language studied at Spanish schools is English. It is a well known fact that English as a Foreign Language teaching material is currently one of the most prosperous publishing industries in the world and the market is therefore flooded with highly attractive, up to date courses which very closely resemble each other in layout, content and price. I have selected three textbooks which I consider to be representative of the current teaching practice and which are used in some of the public and private mainstream schools catering for children with *visual impairments* that I have visited. These books are *Fantastic Fanfare1* (Oxford), *Bingo 1* (Longman) *and*

Buzz BBC Primary English[21]. Each course is composed of a student's book and workbook, tapes and a *teacher´s resource pack*, which generally consists of colour flashcards, posters and accessories for playing games, such as *lexical* or *character* cards. All of them suggest the use of their proposed teaching tools – illustrations, storytelling, songs, rhymes and chants, games and art and craft activities- in an almost totally visual manner; thus, new language items are introduced by means of visual aids: either flashcards or illustrations of the stories in the textbook that often come in the form of bubbles or comic strips.

Undoubtedly, this is a good way to expose the pupils to language which is slightly beyond their level but whose meaning is easily understood through visual clues. It is, however, useless for a child who cannot see.

Stories often lead to enjoyable activities which allow the child to concentrate on meaning leaving form aside: dramatizing a story through *mime* and *gesture* –in themselves wonderful forms of self expression- can be used to elicit language, or just to allow pupils to

[21] Photocopies of some chapters of these books can be found in Appendix II.

participate without having to produce language. But children with *visual loss* –either totally blind or with some residual vision- often have some mobility restrictions, and besides, are unable to imitate by observing other people's movements.

Rhymes, songs and chants are usually a vehicle for a lot of active vocabulary, the meaning of which is usually conveyed through the use of *imagery* or *gesture* and *mime*; this again poses a problem to the blind child.

Games are widely used with young learners, as not only are they thought to help them acquire a second language in the natural way that native speakers do, but they are also supposed to develop the pupils´social skills. About half of the games proposed in the course books that concern us are *Total Physical Response* (TPR) activities, where children have to mime or carry out instructions which often involve moving around the classroom. Whether a blind child could join in or not would very much depend on the exact nature of the game, but in many cases it would be difficult without the mainstream teacher's special help. Other games involve cards,

stickers, bubbles or *guessing activities* with visual clues the blind child cannot decipher unless they are adapted for tactile recognition.

Art and craft activities –an important part of the primary school curriculum- are often used in the foreign language classroom not only to aid the *holistic* development of the child, but also as a very good means of giving him comprehensible language input –such as in *listen and complete* activities- as well as for revising vocabulary. This sort of activity is by nature visual, as it involves drawing, painting, cutting out, sticking on etc. It would be meaningless for a blind child, unless it involved three-dimensional work which can be manipulated tactilely, such as making plasticine or clay puppets.

Art and craft activities performed in class and as homework are often used to make up each child's individual *English scrapbook*, which can be displayed in the school´s annual exhibition. Research has shown that young learners feel generally very stimulated by the prospect of exhibiting their work, so undoubtedly this sort of activity adds to creating a positive attitude towards language learning. Unfortunately, scrapbook making is not available to a pupil with *visual loss* unless major adjustments are made.

Even the activities aimed at developing the pupils´ spelling strategies are mainly visual, as they are often centred in the use of visual memory.

Some courses include optional computer games and videos that are very useful as additional teaching material the teacher can resort to during lesson time. Once again, children with *visual impairments* are frequently excluded from this type of activity.

Sighted young learners use *picture dictionaries* extensively -as their visual layout make them particularly user-friendly- whereas their blind peers must be content with braille bilingual dictionaries –if there happens to be one suitable for their particular level- or use no dictionary at all.

If the school has access to *authentic material* from English speaking communities, most of it will be inaccessible to the blind child, as even radio recordings would need to be accompanied by some support for understanding, which is usually made of visual clues.

To conclude, EFL textbooks are highly visual and propose lesson plans that are to a greater or lesser extent inadequate for a child with *sight loss,* depending on the *residual vision* of the pupil. Some children with *low vision* can read print provided they have access to magnification aids or have *task lighting* for their work base. Depending on the particular characteristics of their eyesight condition, they might be able to participate in some of the class activities without major modifications to the learning environment.

The situation is more dramatic for the pupils who are *educationally blind*, for they have to cope with the braille version of these attractive, colourful and often cluttered textbooks. It is usually the case that by the time the child gets through the tedious description of the complicated illustrations –whether in braille or tape, the mother tongue of the pupil is used, so there is no question of avoiding code switching- his sighted peers have moved on to a different exercise. As there is rarely in-class support for a blind child in Spanish mainstream schools, many of the activities will be unsuitable for him, unless the teacher invests some time adapting the exercise so that it can include the pupil. However, this is time-consuming and often results in class management loss.

On average, an EFL mainstream teacher tutoring a child with *visual loss* can count on the help of a visiting specialist from the O.N.C.E –who is responsible for all transcriptions from print into braille and vice versa and for adapting other teaching material- as well as with the advice and support of the coordinator for *special educational needs*. The degree to which the learning environment and the teaching methods used in a modern language class are adapted to meet the needs of a blind student varies greatly, depending of the teacher's willingness to invest extra time planning strategies to accommodate the child. However, it is very hard to change the prevailing pictorial approach in order to adapt to the needs of a pupil with *visual loss*, even for the most willing tutor, particularly if we bear in mind that teachers tend to feel overloaded in the current educational climate.

If blind children are to have equal learning opportunities to those enjoyed by their peers with no disabilities, then they should be able to access to the same attractive materials, but adapted to stimulate their sense of hearing, touch, taste and smell; it would hardly be reasonable to expect the mainstream teacher to adapt every single teaching aid with visual clues to accommodate the blind

child, even if she receives help from peripatetic staff and the school's *special needs* resource base. For one thing, she might not have the imagination or expertise required for successfully adapting visual material to tactile stimuli; On the other hand it would be excessively time consuming.

In conclusion, the adaptation of visual teaching aids for TEFL should be the resposibility of neither mainstream language teachers nor the peripatetic visiting staff, not only because people in the teaching profession tend to be overloaded with work but also because it is a specialized task that might not be suitable for the average teacher.

One of the reasons why EFL textbooks adapted for blind children are usually just braille versions with little or no special treatment of illustrations is that, as a result of the overwhelming amount of publishers offering course books –which are constantly being revised and changed- it is difficult to find two mainstream schools catering for blind pupils which use the same book. Thus, the adaptations that the O.N.C.E does of these texts rarely serve more than one single pupil. It is costly and time-consuming to produce a

braille version of these courses; it would be completely unfeasible to adapt tactilely every single illustration they contain.

The *tactile resource pack* developed for this doctoral thesis - covering the basic vocabulary and language structures that appear in *all* course books serving the 3rd and 4th grades- could be highly useful for EFL primary school teachers tutoring pupils with *visual impairments*. Thus, the blind child integrated in a mainstream setting, whilst still unable to enjoy exactly the same opportunities as her sighted peers in the English classroom, would at least have access to some learning aids with a motivational impact similar to that found in visual pictures. This *tactile resource pack* –which is visually attractive not only with a view to serving pupils with *residual vision* but also in order to invite sighted children to use it as well- can be employed for introducing new vocabulary, practising linguistic structures and as a revising device.

In the next chapter, current research concerning the blind individual´s capacity to interpret and create graphic representation is reviewed in order to support my contention that the tactile

instructional material developed for this thesis is an adequate pedagogical device for young learners with sight loss.

7. Graphic representation through the sense of touch

7.1. Blindness and art

Creativity is a vital part of our growth process as human beings (Vygotsky 1930); therefore educational systems should ensure that every child gets the opportunity to learn how to express his thoughts and ideas in his own manner and at his particular level of development (Shaw 1986). However, current educational practice tends to impose outside standards to the child, thus undermining the importance of his own creative powers (Gardner 1990). The blind population runs a special risk of having their artistic potential neglected throughout their schooling, as many educators believe that the impairment of blindness imposes great limitations in the artistic development of students. However, scholars from different countries have done extensive research in order to prove that blind people are able not only to appreciate but also to create works of *visual art*.

According to Kennedy and Erikson (Kennedy & Erikson 1993) blind individuals recognise the outline shape of familiar objects and are therefore able to represent their surroundings by means of the same devices as sighted people (i.e. the conveyance of depth through foreshortened shapes and converging lines; motion by the use of irregular lines; certain universal symbols for abstract messages etc). However, they concluded from their experimental work that the *early blind* –congenitally blind people or blinded during infancy- have greater difficulty in mastering the skill of raised-line drawing than the *later blind* –who, having lost their sight after the age of 5, are familiar with visual symbols.

In contrast, Japanese researchers Shimizu, Saida and Shimura (1993) reached more optimistic conclusions about the restrictions imposed by this sensory impairment, claiming that approximately 60% of the *early blind* are able to read–and produce- raised line drawings successfully. Their experiments to test the blind population´s capacity to use outlines and perspective to describe the arrangements of objects and other surfaces in space demonstrated that the sense of touch relies very much upon the same information as the sense of sight.

Kennedy´s contention is that both senses are closely related even though each of them receives input from a different source: while touch relies on pressure, sight results from our response to a change in light (Kennedy 1997). For both blind and sighted individuals a line is the representation of a boundary around an object or shape, which for the former is indicated by pressure boarders and for the latter by brightness boarders. He argues that graphic representation involves not just the sense of sight, for, in the brain region responsible for this function –called *multi-modal* or *amodal*- visual and tactile signals are co-ordinated in order to interpret or create a graphic work. This mechanism takes place even in the absence of vision, which explains sightless people´s capacity to use graphic symbols. He stresses the importance of using raised line pictures extensively in the educational programmes for blind children and quotes the Art Education for the Blind Project -associated to the Whitney Museum of American Art- as an example to be followed by other cultural institutions around the world.

.

One of the pioneers in the field of teaching art to the blind was Shiro Fukurai, who during the 1960´s started an innovative

programme at Kobe School for the Blind (Japan) whereby congenitally blind pupils were invited to learn india ink brush drawing. His experience obtained from running this and other art workshops led him to the conclusion that "children who are blind can also make impressive works, sometimes better than those of children with normal vision" (Fukurai 1969;7). As can be appreciated from the illustrations in his book (Fukurai 1969) and pamflets as well as in his documentary film[22], the art work produced by his pupils shows great creativity and capacity to communicate feelings and moods. The children used traditional Japanese brushes to do their drawings, which, once completed, were traced in glue and then filled in with sands and marked with a dotted line made with a tracing wheel so that the authors could *feel* their own work.

[22] The Children of the Dark (Fukurai 1959) received the Minister of Education prize in the Japan Educational Films Festival 1959.

As Polly Edman points out (Edman 1992), blind children´s art bears great similarities to that of the sighted, which proves the existence of a close connection between the senses of sight and touch. In this respect it is worth mentioning a multi-sensory experience project called *the tactile prehistoric cave installation* carried out by blind, visually impaired and sighted students and co-ordinated by K.C. Spitzberg from Drew University in 1996. This installation, now in permanent display at St. Joseph´s School for the Blind in Jersey City, shows that working through the sense of touch can result in art work aesthetically very similar to that of the sighted (Spitzberg 1997).

Fukurai firmly believed that art work was a powerful means of self-expression as well as a great source of enjoyment for the blind as not only does it enhance the positive emotional factors of learning –such as motivation and self-esteem- but it can also be used to develop the left brain aspects of cognition in the blind child. Thus, it can be concluded that the use of tactile pictures for the teaching of foreign languages to young children with visual impairments could improve the quality of their learning process as well as help them foster a more positive attitude towards other cultures.

7.2. Tactile pictures

We live in a world that is markedly geared to visual impressions; thus, most descriptions and instructive materials are pictorial, and language is full of words that are constant reminders of visual images. This prevalence of *visuality* is responsible for the dulling of our remaining senses, thus creating an unbalance in our system of perception which hinders our *holistic development* as human beings. Our highly visual society is particularly hostile to the blind and visually impaired population, who find all sorts of difficulties and obstacles in their daily lives and whose cognitive development and educational opportunities can be hampered unless alternative routes to learning –involving the remaining senses- are used.

Seeing –in the wider sense of the word- whether done with the eyes or with the fingers, is a process of interpretation based on background experience, knowledge and environment. *Tactile pictures* can be defined as recordings of facts that are tactile symbols, which give chunks of information through the fingertips. The extent to which this information makes sense, has any real value or adds to a

blind person's *memory banks* depends on his or her ability to understand these forms. It is, therefore, crucial that these pictures should have a clear, simple layout understandable through the fingers and not through the eyes (Edman 1992).

Although current teaching practice does not completely exclude art work from the school activities of blind children, this powerful learning device is grossly underestimated and underused in the Spanish educational system, where the tendency is to substitute any graphic representation within the instructional material by a detailed description (either verbal or in braille); likewise, the blind pupil is often excluded from most school activities related to visual arts in spite of the fact that they could easily perform most tasks with a raised-line drawing kit. Consisting of a stiffboard covered with a layer of rubber and a thin plastic sheet, this kit is designed so that the pressure from any ball-point pen produces a raised line on the plastic sheet forming a relief that the blind child can touch. This form of drawing is particularly useful to help young learners become familiar with the basic geometrical forms -which in turn can be developed into all sorts of objects: for example, a square and a triangle becomes a house, a rectangle and 2 circles a car, etc-. By working with solid

blocks and drawing around them on a plastic sheet, blind pupils become acquainted with flat versions of three-dimensional objects, which help them develop their memory of form, thus contributing to their understanding of pictures.

It is often argued by educational experts in *visual impairments* that a picture is just a way to organize the mind and that it can never take the place of a three-dimensional object; however, it often does, particularly as far as educational material destined to be used in the classroom is concerned. It is impractical to have to produce palpable objects for every concept tackled in class, not only because they would be time-consuming to obtain or costly to purchase but also because it would create serious storage space problems. Besides, pictures often represent objects that are unavailable -their scale might be too large to be physically understood in their complete form- or cannot be touched- they might be breakable or dangerous-.

Tactile and visual pictures vary in a number of ways: whereas sight is a simultaneous and continuous sensory system which gives immediate information on parts and wholes, touch is sequential and needs a narrative type of cognition to extract holistic meaning.

Consequently, perceiving through touch is altogether a slower process than perceiving through vision (Kennedy 1982; Edman 1992). The distances and sizes that blind people can experience physically are much more limited than those that can be measured and assessed through vision. This could pose some problems on the understanding of perspective, size relationships and related abstractions. Thus, much information usually contained in visual illustrations which the eye recognizes and identifies immediately is highly confusing to apprehend by the sense of touch. Tactile material must therefore be presented in a clear, concise display made for the fingers to recognize and understand. Each picture should contain a limited amount of information, so only the really important facts or features should be represented: any unnecessary background or confusing forms are to be omitted. It is often the case that when a *tactile picture* is adapted from a visual original, it needs to be broken into several *step by step* illustrations, each of them containing small chunks of information.

There are many different types of *tactile illustration*s, depending on the purpose they serve, the age group they are intended for, whether they will be used with or without the help of a

sighted person, a tape recording or a braille text, if they will be used at school, for leisure reading, games, etc. The choice of materials is also conditioned by the ultimate use of the display: whether one, several or many copies will be made, the number of readers the material will serve, etc.

For this research project it was decided to elaborate a number of *tactile experience silhouettes* and *pictures* –the *tactile aids* that are most extensively used with young learners- in order to teach English to blind and visually impaired pupils. These pictures –which are made with materials that are familiar to children and resemble tactilely the object they intend to portray- are intended to develop their ability to recognize different shapes and textures. Although these materials are chosen mainly for their tactile characteristics, it should nevertheless be borne in mind that *tactile experience pictures* are often employed by children with *residual vision* as well as by mixed groups of blind and sighted pupils and therefore should be visually attractive too. They often include items meant to increase the young blind reader's desire for active participation, such as purses that open, zippers, legs or arms that move, etc. Likewise, the senses of hearing, taste and

smell can be stimulated by adding gadgets such as *scratch and sniff* stickers, *sound* buttons etc.

However, the TEFL tactile material developed for this thesis involves just the sense of touch, sight and hearing, consisting of a number of *texturised* flat shapes with detachable parts easily recognizable for the blind learner that substitute some of the illustrations and visual aids often used in the primary English classroom.

The following chapter focuses on the methodology used for the fieldwork carried out in order to prove that the use of tactile instructional material complementary to the official textbooks facilitates the learning process of the blind and partially sighted child by improving his attitude towards foreign languages -promoting, at the same time, the integration of impaired and non-impaired young learners-.

8. Methodology

8.1 Hypothesis

Current teaching practice endorses the use of methods that stimulate the student´s desire to learn through motivating activities and pedagogical aids; thus, there is a tendency to acknowledge the importance of the role played by affect in the learning process. If the quality of learning is improved when the emotional side of the student is taken into account, it can be concluded that the instructional material for every school subject should address the whole learner, reaching beyond the specific objectives of the curricula onto a broader goal: the integral development of the human being (Stevick 1980; Arnold 1999; Moscowitz 1999). In the case of foreign languages, the Spanish National Curriculum endorses the idea that a second language can be acquired the same way as the mother tongue and therefore priority is given to communicative competence over formal academic learning of rules and grammar. As it acknowledges the importance of a positive attitude towards other languages and cultures in the learning process, it recommends linguistic contents and related activities that are particularly meaningful and stimulating

for each age group. Thus, English Language textbooks for young learners are designed to facilitate the learning process through enjoyable activities that involve art work, music and body movement. It is not the purpose of this study to evaluate the efficiency of these methods in the average Spanish school –which would largely depend on teacher competence and the particular circumstances of the group-. However, if there happens to be a blind or visually impaired child in the class –and nowadays about 90% of these pupils attend mainstream settings- it is extremely difficult for the teacher to integrate the impaired learner into the activities suggested by the textbooks, as they usually involve the sense of sight. The O.N.C.E provides a braille version of the book, but this solution is often considered unsatisfactory, as for most young learners reading detailed descriptions of images that are meaningless to them is a rather tedious task.

Drawing on a my interviews with teachers and pupils, It can be concluded that children with visual impairments integrated in mainstream schools tend to develop a negative attitude towards foreign languages as well as obtain poor academic results probably due to the lack of appropriate instructional material.

The aim of this thesis is to verify the following hypotheses:

1- Blindness does not hamper second language acquisition

2- Blind children –just like their sighted peers- learn better with a method that fosters a positive attitude towards languages, takes into account the affective side of the student, involves enjoyable, meaningful activities that stimulate the different senses and is concerned with the development of the pupil´s creativity and expressive powers.

3- Current teaching practice in Spain does not provide adequate infrastructure or instructional materials for blind children attending a mainstream English classroom and therefore these learners do not have the same opportunities as their sighted classmates.

4- When blind and visually impaired pupils are taught through instructional material that takes into account their sensory deficiency their attitude towards foreign languages improves - together with their academic performance- provided that

-it contains tactile motivational impact equivalent to the visual stimuli usually found in textbooks designed for sighted children

-it stimulates the different *intelligences* –spatial, musical, logical, linguistic, kinesthetic, naturalist, interpersonal,

intrapersonal- so that the different learning styles are taken care of.

-it enhances the development of the blind child´s creativity and self -expression

-it promotes the blind young learner´s integration into the sighted classroom through activities specially designed to encourage cooperation between impaired and non-impaired pupils.

8.2 Procedure

In order to verify these hypotheses two pilot studies were designed to be carried out in private sessions, mainstream settings and an experimental summer camp. The instructional material to be used in this fieldwork was elaborated after conducting a number of interviews with teachers, pupils and experts in the field of visual impairments and observing some mainstream school EFL classes with blind children.

8.2.1 the instructional material

The tactile instructional material was specially designed for blind and visually impaired children enrolled in the second cycle of primary education attending both mainstream and segregated settings. It is intended to facilitate the integration of these learners into an English classroom of sighted children as not only does it take their sensory impairment into account but it is also designed to enable them to work along with the rest of the class at roughly the same pace.

The material follows Howard Gardner´s guidelines for individual-centred education, an approach whereby human beings are thought to have minds intrinsically different from each other and that consequently takes into account the individual profiles of intelligence in order to fully develop the intellectual potential of each person according to his or her own learning styles (Gardner 1993). Gardner advocates the study of traditional areas in untraditional ways, as he believes that the manner in which the material is presented is crucial to the success or failure of the learning process. Thus, each subject can be presented through different *modes of knowing* that correlate to the 8 different intelligences. The tactile instructional material

developed for this thesis proposes activities related to all 8 *frames of mind* and addresses both the cognitive and the affective aspects of the learner.

It is the result of many months of fieldwork, which involved interviewing specialist psychologists, teachers of the blind and the visually impaired, early intervention experts, EFL teachers and children with *vision loss* as well as frequent visits to mainstream schools catering for blind pupils.

Through the specialists from the O.N.C.E´s Early Intervention Centre in Madrid I gained access to the tactile material employed in their programme to develop the blind infant's finger-exploring skills as well as to introduce him to *graphic symbols* –a complicated learning process whereby the child moves from a real object to its three-dimensional toy version and finally to a relief display or raised-line drawing depicting that same object (Lucerga 1998). I also visited New York's Lighthouse Inc. Child Development Center[23], which provides early intervention and pre-school services to blind and visually impaired children aged 0-7. This centre –running a special

programme whereby *sighted* pupils are integrated into blind children's classrooms- uses very interesting multi-sensory teaching aids for children with and without visual impairments.

By studying the instructional material pertaining to these centres and observing blind young learners exploring it I obtained valuable information about *seeing* through the sense of touch, which enabled me to elaborate *tactile experience sheets* of my own creation.

At the same time, I was interviewing peripatetic *vision* teachers –responsible for adapting primary and secondary school learning material for blind and visually impaired children- as well as *special educational needs* co-ordinators and EFL teachers catering for pupils with *sight loss*. I thus learned about the main difficulties involving the teaching of a foreign language to a child with visual problems and the usual procedures followed to accommodate a sightless young learner to a mainstream English classroom.

[23] 111 East 59th Street, New York NY 10022. www.lighthouse.org

Drawing on recent research concerning the interpretation of graphic symbols by blind people (Miñabres et al 1996; Kennedy 1997; Lucerga 1998) it can be concluded that *pictures* are not only the privilege of the sighted as they can also be used and enjoyed by the blind when properly adapted for tactile recognition. Instructional material usually contains a substantial number of *pictures* of some sort –illustrations, diagrams, maps etc- as not only do they provide a lot of information but they also have great motivational impact, which is crucial in the case of young learners.

English language course books for children are *particularly* visual, as research has shown that teaching through attractive material improves the learning process (Ellis & Brewster 1991; Wright 1997). If blind children are to enjoy the same opportunities as their sighted peers, they should have access to equally stimulating learning material. The *tactile resource pack* developed for this thesis contains *tactile experience pictures* with the same motivational impact as the average textbook illustration; in addition, it enables the blind child to participate in many class activities based on visual aids, as the *tactile pictures* substitute the text drawings or flashcards used by the rest of the class. The *pack* is visually attractive, so it is appropriate for group

work where blind and sighted learners team up; it thus creates opportunities for a greater social interaction between impaired children and their peers with no disabilities, which is after all one of the strongest arguments in favour of *integration.*

8.2.2 Interviews

a- *Interviews with students*

In order to obtain information about how blind and visually impaired children feel about learning foreign languages in a mainstream setting, 15 pupils were interviewed (7 aged 8-10; 4 aged 11-13; 4 aged 14-16).

They were given questionnaire 1(see appendix IV).

results

1-¿te gusta aprender inglés?

age	Sí	no	por qué no (only those who answered no)
8-10	28.56%	71,44%	-es aburrido (28.56.8%)
			-es difícil (14.28%)
			-hay que leer mucho en braille (28.56%)
11-13	50%	50%	-es aburrido (25%)
			-es difícil (25%)
14-16	75%	25%	-es aburrido (25%)

2- ¿te resulta difícil?

	sí	no	lo más difícil (answered by all)
8-10	71.44%	28.56%	-entender a la profesora (28.56%) -los ejercicios son demasiado rápidos (28.56%) -a veces no sé lo que hacer (42.84%)
11-13	50%	50%	-la gramática (25%) -hay mucho vocabulario (25%) -entender las cintas (25%) -simon says y esos juegos (25%)
14-16	25%	75%	-la gramática (50%) -memorizar tantas cosas (25%) -los auxiliares (25%)

3-¿crees que aprender inglés puede ser importante para tu futuro?

	sí	no	no sé
8-10	28.6%	----	71.4%
11-13	75%	----	25%
14-16	75%	----	25%

Comments

Students´ attitude differed according to their age; whereas the older pupils –aged 14-16- were more enthusiastic about learning English and seemed reasonably satisfied with the braille versions of their textbooks, the younger children found it boring and difficult. Braille readers complained about the tedious, endless descriptions of visual illustrations they had to endure in order to follow the mainstream English class. Those still able to read print considered the course book pictures to be confusing, cluttered and difficult to identify. The younger children´s difficulty to understand the teacher could be a consequence of the great amount of body language and flashcards used in a foreign language class where the majority of students are sighted. Overall, it seems that pupils´ attitude towards learning languages improves as they become older, probably due to the fact that during adolescence the child reaches the stage of formal thought (Piaget & Inhelder 1966) in which the blind individual overcomes many of the figurative problems caused by his lack of sight and therefore his learning abilities improve altogether (Ochaita 1993; Dimnovic & Tobin 1998). Likewise, when a blind student reaches his early teens he presumably has greater mastery of braille, which would render it easier for him to keep up with his sighted classmates (Huebner 1986).

b- interviews with TEFL teachers

From my interviews with these children's English teachers -which took the form of informal conversations- it was concluded that the main difficulty that blind and visually impaired young learners attending a mainstream school confront is caused by the *visuality* of the course books. The EFL teachers interviewed approached the problem in different ways; the most enthusiastic and devoted adapted some illustrations themselves –either by converting them into *raised-line drawings* or by transforming them into multi-textured *collages* which the O.N.C.E turned into *thermoformed*[24] displays-, or they kept bringing to class appropriate three-dimensional objects to substitute visual clues. However, they admitted that it was very time-consuming and that the results were not entirely satisfactory. Others had decided to accommodate the mainstream class to the blind child's needs, thus omitting many activities from the textbook which they considered to be *too visual*. As a result, they sacrificed most instructional material with any motivational impact and taught mainly through translation and writing exercises. A third group had opted for separating the visually impaired learner from the rest of the class by

setting him written tasks while they attended to the sighted children and vice versa.

None of them, however, were fully satisfied with the present situation, as they felt they were either neglecting the blind pupil or the sighted group and could not conceive of a way to get *all* children to work harmoniously together without the aid of a *support* teacher –who is not usually available in the Spanish system-.

When asked what sort of instructional material they thought would facilitate their teaching an integrated class with a visually impaired child, some of them suggested that having tactile support for every *unit of work* should be convenient, as it would enable the blind learner to understand the new vocabulary and linguistic structures better while helping him integrate in pair or group work with his sighted peers.

[24] *Thermoforming* is a term which refers to the reproduction of plastic copies from a relief master, usually by means of a vacuum-forming machine (Edman 1992).

8.2.3. Class observation

The experimenter obtained permission to observe several mainstream English classes with a blind or visually impaired pupil in 5 state schools in the Community of Madrid[25].

School 1

-class: 4º Educación Primaria
-textbook: Fantastic Fanfare, Oxford
-one totally blind child
-number of classes observed: 3

The teacher was very dynamic and full of enthusiasm. She used approximately 30% of the target language in the classroom; the rest of the time she spoke in Spanish, which she immediately translated into English. She did a variety of activities, often dividing the pupils into pairs or teams.

The blind child was a very clever, perceptive boy that seemed well adapted to the group; he participated in every single activity. In Total Physical Response games he always worked with a classmate who would hold his hand to help him perform the required tasks.

[25] At the EFL teachers´ request, I omit the names of the schools.

For those activities that relied on visual references the teacher had prepared tactile illustrations for the impaired student, so he found no difficulties here either. This pupil usually obtained top marks in English.

Comments: this integrated class worked extremely well, but the teacher put in a lot of extra work to prepare special instructional material for the child.

It is unusual to find a teacher who spends so much of her own time to make an integrated classroom work and a pupil –either blind or sighted- who is so outstandingly bright.

School 2

-Class: 5º Educación Primaria
-book: Get Set Go Oxford
-one totally blind pupil
-hours observed: 3

The language used in the classroom was 90% Spanish and 10% English, which was immediately translated into Spanish. Many tasks involved copying from blackboard and written work. There were very few communicative activities.

The teacher seemed rather anxious about the blind child, and spent at least 25 minutes per class working exclusively with him while the rest of the pupils was supposed to engage in written activities but in fact indulged in disruptive behaviour most of the time. Many of the activities suggested in the book were omitted, as the teacher considered them too visual for the blind child. Thus, the sighted majority was sacrificed in favour of the impaired learner.

Comments: this approach to *full inclusion* makes many people turn against it, as the purpose of this educational system is to improve the learning opportunities of all students, not just of those with special needs at the expense of the rest. Apart from being a waste of time for the sighted children, it makes the blind pupil feel conspicuous and isolated from the group, and this is often a source of anxiety that blocks his learning capacity.

School 3

-Class: 4º de Educación Primaria
-Textbook: Top Class (4º primaria) OUP
-one visually impaired child (but quickly losing his sight)
-classes observed: 3

The teacher used Spanish about 75% of the time and the remaining 30% English, which she immediately translated into Spanish. About 35% of the class activities were communicative and the rest involved either drawing, writing or video watching.

The partially sighted child had still enough residual vision to read in print, and, being a bright pupil, he had no difficulty in following the pace of the class except when the book illustrations were particularly complicated.

Comments: As I mentioned in chapter 2, *visual impairments* is an umbrella term that covers many types of sight difficulties; thus, the problems encountered by each individual child will vary widely. In the case of this particular student, he still functions very much as a sighted learner, but as he will probably be totally blind in a year or so, he will have trouble with the visual aids used in the classroom, as the teacher relies heavily on them to make herself understood.

School 4

-Class: 3º de Educación Primaria
-Book: Bingo 1
-one totally blind child
-number of hours observed: 3

The teacher talked about 80% of the time in Spanish and the other 20% in English (often translated into Spanish). She did a lot of communicative activities and tried very hard to integrate the blind child with the rest of the pupils. She adapted *some* of the visual aids and book illustrations tactilely (or got the O.N.C.E to do it, but she complained that they required her to make her request at least two weeks in advance, which forced her to plan her classes a long time ahead. Consequently she did the work herself most of the time). She found this extra class preparation too time-consuming and yet not totally satisfactory, as the child had many difficulties following the pace of the class even when he had access to tactile illustrations.

Comments: This seems to be a typical case of a well-intended EFL teacher who is ready to invest some of her personal time to accommodate a blind child to the classroom but feels rather frustrated by the results, as the amount of material she manages to adapt is insufficient; besides, if the blind child is a slow learner, or

often absent from school due to health problems –as was the case of this particular pupil- it is very difficult to get him to work along with his sighted peers in the absence of a class *aide*.

School 5

-class: 5º de Educación primaria
-book: Top Class (5º primaria) O.U.P
-one visually impaired girl
-hours observed: 3

The teacher used practically no English to address the class. Pupils spent a lot of time writing and doing art and craft activities as well as watching videos. The teacher devoted a lot of time to the impaired girl –she had learned braille and seemed to be helping the partially sighted girl to improve her braille-reading skills rather than teaching her English-.

Comments: This was the typical case of an EFL teacher who has not been trained to use the communicative approach in the classroom and who loses her class management completely when a child with special needs is placed in her group.

8.3. Subjects

The researcher was forced to use small samples due to the reduced number of blind or visually impaired pupils with no additional disabilities. In the case of pilot study 1 all subjects were academically able children affiliated to the O.N.C.E and attending mainstream schools. In the first stage of the experiment -where the tactile instructional material was tested in one to one sessions- the participants were 10 children aged 6-11 (see next chapter for details). The second stage involved the use of these materials in mainstream settings, and was therefore much more difficult to organize as it required a special permission from the school -apart from the teacher´s willingness to alter her lesson plans in order to accommodate the experiment. Consequently the sample was reduced to 3 subjects aged 8-10**.**

For Pilot study 2 –an intensive English course offered at the O.N.C.E´s summer camp, where sighted children are invited to integrate with their blind and visually impaired peers - there were 15 subjects between the ages of 8 and 10 ranging in vision from total blindness to normal sight (see next chapter for details).

8.4. Design of experiments

These experiments fall under the category of quasi-experimental in Seliger and Shohamy´s classification of qualitative research (Seliger and Shohamy 1989) as the researcher was unable to assign subjects to special groups for the purposes of the study; in addition, the conditions of the experiments were such that many of the variables were difficult to control. Furthermore, there was only one group of subjects available, and therefore the procedure followed was to give a single treatment to a single group, which was then observed and compared to itself before the treatment. In the absence of a control group, the subjects had to be used as their own controls and therefore were given two questionnaires, one before the experimental course and the other after. However, this type of experimental design is considered appropriate for studies whose main objective is to try out new teaching materials for special educational needs (Ferrell 1985; Edman 1992).

The questionnaires were inspired in Robert Gardner´s Attitude/Motivation Test Battery designed to measure attributes of

second language learning such as motivation, integrativeness, attitudes towards the language situation and language anxiety (Gardner 1985). As the subjects were *young pupils* learning a foreign language, these questionnaires are short, simple and contain some open-ended quest*ions, which are* well suited for children (see appendix IV).

9. Fieldwork

9.1. Pilot study 1: the tactile resource pack

This experiment was designed to investigate the impact of the use of specially designed instructional material upon the learning process of blind and visually impaired pupils studying in a mainstream setting or with a private teacher as well as its influence over these pupils´ attitude towards foreign languages; it was likewise intended to evaluate the contribution of this instructional material towards a greater integration of the impaired children among their sighted peers.

9.1.1. Subjects

The subjects were 10 blind and visually impaired subjects aged 6-11 attending mainstream schools (2 partially sighted 6 year olds from private school offering English in the first cycle of primary education were included in the sample, as the material was considered appropriate for very young learners too). All participants

were academically able children who had opted for a mainstream educational setting, either private or public.

1- Subject A (aged 6): girl. *infantile glaucoma.* Some residual vision in one eye, which she is gradually losing.
2- Subject B (aged 6): boy. *retinopathy of prematurity* (eye condition associated with premature babies exposed to oxygen for prolonged periods). Has some residual vision.
3- Subject C (aged 8): boy. *Infantile glaucoma*. Some light perception.
4- Subject D (aged 8): girl. General psychomotor deficiency that affects eyesight also. Some light perception.
5- Subject E (aged 8): boy. Retinopathy of prematurity. Some residual vision.
6- Subject F (aged 9): boy. Sighted until one year ago. Suffers from a genetic disease where the retina is destroyed before puberty. He is losing his sight fast.
7- Subject G (aged 10). Boy. Sighted until the age of 4. Blindness caused by brain tumour. Has very little residual vision.

8- Subject H (aged 10): girl. congenital cataracts. Lost an eye in an operation. Has some residual vision.

9- Subject I (aged 11): girl. Retinopathy of prematurity. Very little residual sight.

10 Subject J (aged 11): girl. Infantile glaucoma. Some residual vision.

9.1.2. The tactile instructional material

From the interviews with teachers and students and the class observation sessions it was deduced that most mainstream EFL teachers with visually impaired pupils had serious difficulties due not only to their lack of training in special education but also because of the inadequacy of the material used. The solution seemed to be the development of a *tactile resource pack* related to the main topics studied at primary English level usable with any of the textbooks available in the current Spanish educational system.

The *pack* was created an tested on 10 blind and visually impaired children. The items from the different *tactile experience sheets* within the *pack* proved to be easily recognizable –even for

congenitally blind learners or those blinded before the age of 3, who have no visual references-.

It contains *tactile illustrations* pertaining to 6 units of work and an *interactive storybook* designed to introduce and practise linguistic structures and vocabulary commonly found in 3rd and 4th grade textbooks. It can be used in mainstream schools, *special* education settings or private sessions. All items are two-dimensional and fit into an A3 size folder, so the *pack* can easily be carried from home to school and kept in an ordinary desk.

9.1.2.1. *Selection of the linguistic contents*

As current EFL teaching practice favours linguistic contents that have high communicative value and are meaningful to the pupil[26], those language items considered most useful for learners aged 8-11 were selected.

[26] See Appendix I for a list of contents most commonly found in course books catering for 3rd and 4th graders.

The *resource pack* can be used with complete beginners to introduce new language structures or vocabulary as well as a revision device for pupils about to finish the second cycle of primary education.

9.1.2.2. Description of the *tactile resource pack*[27]

The *tactile resource pack* consists of two workbooks. Number 1 contains 11 *tactile experience sheets* with texturised flat-shapes that serve as substitutes for the visual images and flashcards often used in the EFL classroom, as they cover topics commonly found in primary English course books. These silhouettes –which in some instances can be joined together to form a single item - have been designed to be recognized by shape as well as by texture.

The last 2 tactile experience sheets (numbers 12 & 13) belong to a *tactile interactive storybook* whose main objective is to provide opportunities for the practice and revision of certain grammatical structures and vocabulary as well as to enhance the young learner's creativity and develop his reading skills.

[27] See appendix *IX* for photographs of some of the tactile resource sheets; also the video *Presentation and Use of the Tactile Instructional Material.*

Workbook 2 provides a neutral background for the storybook: it contains several pages –some coloured, others blank- with scattered pieces of *velcro*[28] so that the child can fasten to them any silhouette she chooses from workbook 1 in order to construct her story.

1. the tactile experience sheets

1.*Tactile experience sheet 1 & 2: the face:* the face is oval-shaped surface made of cardboard covered in flesh-coloured felt measuring approximately 20x15 cms. The different parts of the face are separate cut-outs recognizable by shape and texture: there are two pairs of eyes (big and small), two pairs of ears (round and pointed), two noses (one thin and long, the other thick and short), two mouths (one big and toothy, the other small) two *wigs* (short-haired and long-haired) and a pair of eyebrows. These flat shapes are fastened to the face in any desired position by means of *velcro.*

This *sheet* has been designed to substitute the course book's illustrations of *the face* and other related visual aids such as posters, flashcards, etc. When this topic is introduced in a mainstream class

[28] A product consisting of two types of nylon –one with tiny hooked threads, the other with a coarse surface-, which stick together when pressed but can easily be separated again. Every flat shape in the *resource pack* has a piece of hooked *velcro* on the back so

for the first time, the blind learner can use this *tactile experience display* while his sighted peers look at the visual pictures. He will thus be able to participate in typical primary English class activities, such as *listen and point* exercises–where the child receives instructions from a taped song or rhyme telling him to point at different parts of the face, the body etc- and varying types of games;

Below I provide some examples of possible uses of this *tactile display* in a mainstream class.

A- "*My Face*": a game proposed in the course book *Fantastic Fanfare* [29], where pupils, working in groups of four or five, throw a dice to obtain a number; they then draw the part of the face represented by that number –the correspondence item-number having been previously established by the teacher-. The first team to complete the face wins. The blind child's group could use the *tactile display* of the face instead of a drawing, provided that their dice is numbered in braille as well as in print. The sightless pupil should be able to follow this game without difficulty.

that it can be easily fastened to the background, which in turn contains pieces of coarse-surfaced *velcro*.

B- "Label the face": *Buzz*[30] proposes a writing activity where pupils draw and label the different parts of the face; it could easily be adapted for the visually impaired child with the aid of this *tactile experience sheet*: while his sighted peers draw, he could attach the different flat shapes to the silhouette of the face, labelling them in braille.

C- "Draw the faces": this is a type of *picture dictation* proposed by Fantastic Fanfare[31], where pupils are asked to draw a face following certain descriptions. The blind learner could compose *his face* by choosing the items from the *sheet* that most accurately resemble the teacher's description.

This *tactile experience sheet* covers basic vocabulary related to *the face*, the personal pronouns, the present tense of the verb *to be* and adjectives related to physical descriptions (*long/short; thick/thin; big/small; round/pointed etc*).

[29] Fantastic Fanfare (unit 5, p.108).
[30] *Buzz* "write.." (p.118).
[31] Fantastic Fanfare "Draw the faces" (unit 5, p.110).

2.*Tactile experience sheet 3: the body:* The tactile display of the body consists of 8 pieces (head, body, 2 arms, 2 legs, 2 wigs) which joined together represent a human body measuring 29x12 cms. This figure can be male or female, as the pupil is able to choose between a long and a shorthaired wig (both items are made of furry material).

It is advisable to introduce the blind child to this material in a private session to ensure that he identifies each item easily before he uses it in the mainstream English classroom. One way would be to present all items muddled up so that the pupil has to sort out, identify, and join them together. This exercise, apart from acquainting the impaired learner with the material and new vocabulary, would also enable him to revise and practise language items he is already familiar with.

In the mainstream English classroom, this *tactile display* can be very useful: it easily substitutes the illustrations typically found in textbooks often used for *listen and point* class exercises[32] allowing the child to join in stimulating pair work or group activities, such as

guessing games –where one member selects an item and the rest have to guess his choice by asking *yes/no questions*, *WH questions*, etc- or *dice games*, such as "Make a Sylvia" suggested in *Buzz*[33], where each number on the dice represents a part of the body which the dice thrower has to draw. This activity is very similar to the dice game mentioned in *sheets* 1 and 2, and could be adapted for blind learners in the same manner.

3.*Tactile experience sheet 4: clothes.* This *sheet* contains male or female clothes to dress up the figure formed by joining together the items belonging to *sheet* 3. Each item of clothing is made of a different textile fabric and has a distinctive feature which renders it easily recognizable. Thus, *the shirt* is made of felt and has a hard collar and plastic buttons; the *blouse* is smaller and has a round collar; *the skirt* is pleated*; the trousers* have a leather belt; *the socks* are made of wool and *the shoes* are made of leather and have laces. These items are easily fastened to and removed from the human figure.

[32] *Bingo* (unit 7, p.102).
[33] *Buzz* (p.122).

This *sheet* can be used in activities similar to those described for *tactile displays* 1, 2 and 3.

4.*Tactile resource sheet 5: (the house) and 6 (the rooms):* This display consists of 2 size A4 pieces of cardboard. The first piece represents the façade of the house, with a door that opens and closes, 2 windows and a detachable, peaked red roof shaped as a triangle. The second piece depicts the interior of the house and is divided into rooms by thin strips of coarse sandpaper. The staircase occupies exactly the same position as the door on the façade, so that when both pieces are fastened together, the door opens directly to it. The stairs are represented by 6 toothpicks glued to the cardboard. There are 2 rooms downstairs -the kitchen and the living room- and two upstairs –the bedroom and the bathroom. Pieces of coarse-surfaced *velcro* mark the place for the different items of furniture in each room. These two *sheets* are used together with the next*, the furniture*.

4-*Tactile experience sheet 7: the furniture*. These flat shapes depict pieces of furniture commonly found in houses. A description of each of these items follows:

a- For the living room: a table and a chair made of coloured plastic. All 4 legs are shown in every item to avoid confusion.

b- For the bedroom: a bed with 4 legs; a quilt made of cotton fabric and a stuffed pillow; a carpet made of furry material.

c- For the bathroom: a toilet made of adhesive coloured plastic; a bathtub and shower made of adhesive coloured plastic and air-bubbled plastic to depict water.

d- For the kitchen: A cooker made of cardboard with 4 fire rings in relief; a cupboard made of cardboard with a door that opens and bottles inside it made of plastic.

As with the other tactile displays, the child is ideally introduced to the material in a private session; she is asked to identify each item, repeat the name in English, and place it in the right place. In the mainstream class it can be used not only to revise vocabulary related to *the house*; it is also useful for introducing and practising prepositions -such as *in/ on/ in front of/ next to/ up/ down* etc-, for giving and receiving directions in pair or group work, and for practising sentences with *there is/ there are* in the affirmative and the interrogative forms as well as certain *WH questions*, particularly with *where* and *what*.

Needless to say, a child's home is one of his favourite art subjects, and therefore many foreign language teachers plan class activities involving the children's drawings of their homes; this tactile display allows the blind pupil to participate in many of these, provided that the teacher makes the necessary adjustments; thus, the impaired learner will be able to do *picture dictations* or join in *guessing games* related to this topic.

5. *Tactile experience sheet* 8: numbers: this *sheet* consists of 70 easily recognizable by touch stickers of stars, pyramids, rectangles and circles of different colours and shapes. It substitutes the visual illustrations of numbers often found in textbooks and *picture dictionaries.* It can be used to practise counting and for pair work activities where pupils ask each other questions starting with *how many.*

6. *Tactile experience sheet 9:* (the family) and 10 (the family's clothes): these *sheets* can be used in the mainstream class when the topic of the family is introduced as well as for the *interactive storybook,* where the different members of the family become

protagonists. *The family* consists of a boy, a baby girl, the mother and the father.

a- the boy: a silhouette measuring 13x10 cms; his hair is made of furry fabric and he has soft leather shoes; he is depicted in his underwear, as there are 2 separate items of clothing in *sheet* 10 to dress this figure: a T-shirt made of cotton fabric with buttons to facilitate recognition and a pair of trousers made of felt with a leather belt.

b. the baby girl: this figure is shaped as a crawling baby. She has short, fluffy hair and is wearing nappies. She can wear a laced dress from *sheet* 10.

c- the mother: a silhouette measuring 22x12 cms, with long, furry hair and leather boots. She is wearing a swimming costume; she can be dressed with a lace and tulle red gown from *sheet* 11.

d- the father: a silhouette slightly bigger than the mother, with short furry hair and a big beard (also made of furry fabric). This flat shape has a cotton shirt with a hard collar and a pair of felt trousers with a leather belt.

These two *tactile resource sheets* can be used to introduce vocabulary related to *the family*[34] as well as to practise adjectives commonly used for physical descriptions; it also provides an opportunity to revise vocabulary of clothes and the *present continuous tense* (*she is wearing a long skirt* etc).

7. *Tactile experience sheet 11: animals:* This *sheet* can be used for class activities as well as for the *interactive storybook*.

Most children feel very attracted to animals and therefore modern language textbooks often have pet protagonists; moreover, most 3rd and 4th grade books dedicate a whole chapter to animals, which contains illustrations of common pets or house insects around which many class activities are planned. For this *sheet* I have chosen 4 animals, which are popular with young learners: the dog, the cat, the bird and the snake. Each flat shape has a distinctive feature which renders it easily recognizable; Thus, the dog is made of furry fabric and has a leather collar and leash; the cat's ears are pointed and it has long nylon whiskers; the bird's beak is made of hard plastic and it has long, feathery wings and tail; the snake's body is long and partly coiled, made of *flaky* fabric. When used in a mainstream

[34] As in *family cards* proposed in Fantastic Fanfare (unit 6, p.115).

English classroom, these flat shapes of animals can be set on the blind child's desk arranged in the order of the illustrations in the textbook, so that he can follow the *warm up* chants, songs or the *listen and point* exercises which typically open a new *unit of work*[35]. Likewise, if the teacher decides to use flashcards of animals for *guessing games*, this tactile display will enable the pupil to participate in this activity provided that each item is numbered in the same order as the visual material. It can also be used instead of *animal cards* in card games and even adapted to play *Animal Bingo*[36].

2.The Tactile interactive storybook

Current modern language teaching practice endorses *storytelling* as a highly motivating activity that helps young learners develop a positive attitude towards language learning, as it is thought to encourage fluency and develop the child's creativity at the same time as it provides variety and extra language practice by supplementing or complementing a language course (Ellis & Brewester 1991; Wright 1995). For Hopper Hansen stories embody fundamental thinking patterns and archetypal symbols that stimulate the imagination and

[35] *Bingo* (unit 7, p.103).
[36] *Bingo* (unit 7, 105).

are therefore excellent ways to hook the attention not only of young learners but also of adult students (Hopper Hansen 1999).

The market is flooded with very attractive *graded storybooks*[37] for children which are increasingly being used by foreign language teachers not only for *storytelling* as a class activity but also as individual work in *the English corner* or for leisure reading.
However, the blind young learner has no access to these *storybooks,* as the visual support they contain is crucial to the understanding of the text at the beginner´s level.

For this research project I have developed a *tactile storybook* for young blind readers that is *interactive* -there is no fixed story, as all characters and scenery items are tactile flat shapes which can be fastened to a neutral background in whatever order or fashion the storyteller chooses-. Several proposed texts are presented separately (see appendix III), so that the teacher can use the book conventionally if he chooses to; however, it can also be used interactively, as the blind reader can create her own tale using the

[37] A series of (usually) traditional tales written in a simple way for children who are learning English; the higher the grade, the more complicated the language.

figures in the *story sheets* and tell it to teachers, family or peers. It contains 2 *background pages,* the first one depicting a garden scene and the second a bedroom. A *reference line* drawn in relief divides these pages horizontally into two sections in order to give the reader a point of departure to which she can relate as well as to keep objects from becoming free-floating forms. These *story pages* have no fixed background objects; thus, the child can fasten to them any chosen item from the *tactile resource pack*. There are a total of 23 flat shapes for this sample *storybook* from *tactile experience sheets* 9, 10, 11, 12 and 13. The first 3 have already been described in the section devoted to *workbook* 1. Numbers 12 and 13 were specifically designed for the *storybook* and therefore serve as background objects for *the garden* (page 1) and *the room* (page 2).

***Tactile experience sheet* 12: story 1.** Consists of the following items, which serve as background objects for page 1 (*the garden*):

- ***A house*** (made of cardboard with hollowed windows and a door that can be opened and closed).

-

- ***A tree*** (trunk and branches made of cardboard, foliage depicted by artificial leaves).
- ***The sun****:* a sphere with spikes made of pressed foam.
- ***The moon****:* a waning moon made of pressed foam.
- ***A star:*** made of pressed foam.

Tactile experience sheet 13: **story 2.** Contains background objects for page 2 (the room):

- ***A table*****:** a rectangle with four legs made of glazed pressed foam.
- **A *bed*:** a rectangle with 4 legs, with a quilt made of cotton and a stuffed pillow.
- ***A bag of sweets*** (the sweets are oval shapes wrapped up in cellophane paper).
- ***A ball*:** a round flat shape covered in balloon rubber.
- ***A book*** made of leather covers with several paper pages.

This *tactile interactive storybook* can be used for revising elementary vocabulary and grammatical structures from 3rd and 4th grade English textbooks. It is basically a display without words in order to encourage active participation in readers; however, it can

also be used with texts that focus on various structures serving different levels of English.

9.1.3. *Procedure*

9.1.3.1 The tactile resource pack in one-to-one sessions

The different *tactile experience sheets* were tested with each of the 10 subjects in *one to one* sessions at their mainstream school Special Education Unit, where all of them spend some time working with the specialist teacher to reinforce certain skills.

The activities derived from each of these *sheets* varied according to each child's age and level of English. Thus, while the sessions with the younger pupils basically consisted in identifying the items and naming them in English, carrying out commands (such as: *put on the shirt/ take off the skirt* etc) and performing simple tasks, the older learners were expected to use more complicated language; the *sheets* were also used to trigger off conversations around their own home, family, pets etc.

The tactile interactive storybook:

a- *children aged 6-8:* had to be directed quite closely, as their level of English was very basic and they therefore lacked the language skills to create their own story. However, an *interactive book* guarantees a high level of participation, as the pupil has to keep peeling off the different characters from the *tactile experience sheets* in order to dress them, undress them and place them in different spots. In general, they got deeply involved in the activity and learned quite naturally the language used to recount the story.

b-Pupils aged 9 to 11: These pupils, who had been learning English for at least a year, were asked to make up their own tale once they had identified and named in English each of the items that can be used for the story. All of them produced amusing, simple narratives which they wrote in braille for homework (see appendix VI for transcription of some of these stories).

To conclude, the *tactile resource pack* is a useful teaching tool in private sessions with blind and visually impaired children, as it involves them directly in the learning process; the material

proposes a number of tasks where the pupil focuses on meaning rather than on form while *acquiring* quite naturally the language involved in the activity. Young learners find it highly stimulating, which helps create a positive attitude towards language learning.

9.1.3.2 The tactile resource pack in mainstream settings

This instructional material was developed with a view to serving mainstream schools mainly, as nowadays it is the educational option chosen by the majority of learners with *visual impairments*. It is, however, much more difficult to use in this type of setting than in a private session or in *special* schools, as it does not adjust to any particular textbook –there are so many course books serving the Spanish market that it cannot refer to any of them especially- and yet it has to be employed along with whichever one each teacher happens to select for her class.

The use of this *pack* requires careful lesson planning on behalf of the teacher –as she should co-ordinate the proposed activities from each *unit of work* with the items in the *tactile experience sheet* tackling the same topic; however, it is worth the effort, as it helps the

blind child follow the pace of the sighted group as well as join in pair and team work.

The opportunities to test this material in mainstream EFL classrooms were quite limited for a number of reasons:

-the material is handmade and therefore there are only a few copies available; Thus, it can only be used in educational centre at a time.

-some teachers are reluctant to allow any *observer* into their class, let alone another specialist wishing to alter the rhythm of the class by testing new material.

-some allow the experiment to take place, but with little or no continuity.

-school policy usually establishes that the pace of lessons should not be interfered with in any way, and therefore researchers have to wait until the particular topic they want to test is scheduled to be taught in class.

-some of these children undergo operations or follow medical treatments which might cause them to be absent from school frequently, so certain programmed experiments have to be postponed and are difficult to reschedule.

In spite of these difficulties, Pilot Study 1 was accepted in 3 mainstream schools of the community of Madrid with at least one blind pupil enrolled in the second cycle of primary education. During the experiment, the impaired child used the tactile resource sheet related to the topic being taught in the mainstream English classroom instead of the braille transcript of the textbook. The experimenter attended all 6 sessions of the chosen unit of work acting as a class *aide*.

SCHOOL 1

-class: 3º de primaria
-subject C (8 years old; totally blind)
-textbook: Fantastic Fanfare (Oxford)
-unit of work: *my body* (6 hours)
-tactile resource sheets: 2, 3 & 4

Subject C was a rather shy, introverted boy who had difficulties in most school subjects. His EFL teacher had been unable to make him participate in the class activities so he spent most of the time listening to tapes describing the illustrations of the book (in Spanish) and writing English words in braille. The teacher agreed to modify her lesson plans for this unit of work in order to integrate the blind child

into the group with the help of the experimenter and using the *tactile resource pack.*

Subject C –who had also participated in the one to one testing sessions of the tactile resource pack- had answered pre-questionnaire 1 as follows:

1-¿te gusta aprender inglés?
Sí **no**
por qué no
-es aburrido
-hay que leer mucho en braille

2- ¿te resulta difícil?
sí no
-lo más difícil
-entender a la profesora
-a veces no sé lo que hacer

3-¿crees que aprender inglés puede ser importante para tu futuro?
sí no no sé

Session 1

(*All exercises specified below are from the textbook*).

1- *Warm up:* TPR and music. Song from tape F*antastic Fanfare 1* related to parts of the body (see appendix II, Fantastic Fanfare unit 4). The teacher asked subject C to go to the front of the room to serve as model for the different parts of the body (as teacher touched his arms, legs etc every time the words came up in the song, the blind child was able to

understand the English words). The song was played several times so that the children could follow the song´s instructions. The blind pupil joined in enthusiastically.

2- *listen and order the parts of the body*. Sighted children did this exercise looking at Morgan´s portrait (Fantastic Fanfare unit 4) while subject C used *tactile experience sheet 3* (texturised cut-outs of the different parts of the body). He completed the exercise successfully but lagged slightly behind his peers. He was told to ignore the part of the activity related to colours.

3- *draw the monster and label the parts of the body*: at the experimenter´s suggestion, this exercise was slightly modified to accommodate the blind child. The class was divided into groups of 6 and each of them given a piece of cardboard. Pupils drew and cut out different parts of the body (the blind child too, using a raised line pen). They mixed up all different pieces and then in pairs they made a monster fastening the different parts with blue tack. They introduced their monster to their team describing its main characteristics in English. The blind learner

was a little passive at first, so the experimenter had to encourage and help him. However, for the pair work he was matched with a very co-operative girl, so he gained some enthusiasm towards the end of the session.

Session 2 *(activities 2 & 3 were free interpretations of exercises from the textbook).*

1- *Warm up*: TPR with *parts of the body* song (this warm up was repeated throughout the whole unit of work).

2- *Monster work continued* (art and craft activity). The experimenter brought pieces of different texturised material (air bubble plastic, foil, sandpaper, cotton, wool etc) and glue and invited the pupils to use it for their cardboard monsters. Experimenter and classroom teacher went round the groups to help children describe their monsters in English (they required words such as beard, moustache, eyebrows, jacket etc). Subject C seemed well integrated in his group and had no difficulty with the activity.

3- *Guessing game:* one child described one of her group´s monsters and the rest of the class had to guess which. The blind child was allowed to touch them in order to identify them.

Session 3 *(activities 1, 2 & 3 were free interpretations of exercises from the textbook).*

1- warm up:

(a) TPR with *parts of the body* song.

(b)*Hoky-poky dance*: the class was divided into groups of 5; pupils held hands forming a circle and danced to the tape of the *Hoky-Poky dance* (see appendix v for lyrics).

2- *picture dictation*: each group was asked to *unfasten* their monsters and mix the different pieces. Then the teacher played the tape (activity: *listen and number the monsters: appendix II unit 4*). Pupils worked in pairs to make portraits of the monsters described in the tape. The blind child looked motivated by the activity and worked well with his partner.

3- *My favourite monster* (writing activity): children were asked to imagine a very scary monster and describe it in writing. Subject C wrote his description in braille, which was eventually given to the peripatetic teacher to transcribe.

Session 4 *(activities 1, 2 & 3 were free interpretations of exercises from the textbook).*

1. *warm up*: TPR activity with tape song *parts of the body*

2. *worm monsters*. the teacher instructed the different teams to form *worm monsters* by holding each other by the waist. The rest of the class described the other teams´ monster. The blind child joined his group in the monster-formation part of the activity but was unable to describe the other monsters, as the teacher had not adapted that part of the activity to meet his needs.

3. *My monster is* ..... (pair work). One pupil described a monster while the other made a drawing of it. The blind child used a raised line pen to do his. He completed the task successfully.

Session 5 (*activities related to unit of work but not from the textbook*).

1. *warm up*: *what am I wearing?* Children work in pairs. They are asked to look at each other carefully and then stand back to back. They have to say in English what their partner is wearing. As the TEFL teacher had not figured out a way to adapt the exercise for the bind child, the experimenter worked with him using *tactile experience sheet 4* to revise vocabulary related to clothes.

2. *Paper dolls*. The TEFL teacher had brought some paper doll sets (both male and female and with different paper items of clothing). Children worked in pairs: pupil 1 had the paper doll and pupil 2 the different items of clothing. The former requested from his partner the garments he required to dress the doll. The blind child´s team used the silhouettes from experience sheets 3 & 4. The task was performed correctly and in time.

3. *Writing activity*: *I am wearing....* the students wrote a short description of what they are wearing. Subject C wrote his description in braille, which was eventually given to the peripatetic teacher to transcribe.

Session 6 (*activities from textbook and other sources*).

1. warm-up: *they are wearing*.... the experimenter brought some dolls and teddy bears dressed in different garments. The class was divided into 4 groups and pupils from each group sat in a circle. 4 dolls and teddy bears dressed in different ways were placed in the centre of each group. Pupil A took one doll and gave it to a student of his choice (pupil B), who had to describe its clothes in English. If he made any major mistakes, pupil A took it from him and and gave it to a different child but if pupil B completed the task successfully he would pick up another doll and offer it to someone else in the group. As the objects used were tactilely recognisable, the blind child was able to join in the activity.

2. *My family´s clothes*: children were asked to draw a picture of their family paying special attention to their clothes. Then in pairs they described their pictures to each other in English. The blind student used tactile experience sheets 9 & 10 (*the family* and *the family´s clothes*) instead. His description of his family was rather basic but correct.

3. *Monster cards*[38]*.* Children are given blank cards and asked to *draw* monsters by gluing buttons, different shaped stickers, matches etc. Then they play the card game suggested in textbook but going for shapes instead of colours. The blind child had no difficulty with the game and all pupils seemed to enjoy the activity very much.

[38] Adapted from activity suggested in Fantastic Fanfare unit 4.

Subject C –like the rest of the children participating in the experiment- was given a post-activity questionnaire (questionnaire 2) in order to register any changes in his attitude towards foreign languages, which he answered as follows:

1-¿te ha gustado esta unidad didáctica?

Sí no regular

-¿qué es lo que te ha gustado?

–quitar y poner ropas a los muñecos

-hacer los *monster cards* con pegatinas

-trabajar con mis muñecos y mi equipo

-¿qué no te ha gustado?

-Escribir en braille

-hacer el gusano me dio un poquillo de miedo

2- ¿te ha parecido fácil o difícil? regular

-lo más fácil:

-pegar el cuerpo humano

-poner los vestidos

-lo más difícil

-acordarme de todas las palabras de la ropa

-el baile un poquillo difícil pero divertido

3-¿crees que te ha ayudado para mezclarte más con tus compañeros?

Sí no

4-¿te gustaría que todas las clases de inglés fueran así?

Sí no

comments: the tactile resource pack served its purpose as substitute for the visual pictures in the textbook, as the child recognised the different items quite readily and was able to perform the different tasks successfully. During all 6 sessions he was unusually communicative with his sighted peers –whose attitude towards him also improved, probably due to the fact that they felt very attracted towards the tactile material he was using and were eager to try it out themselves. It can therefore be concluded that this experimental unit of work supports the hypothesis that the tactile resource pack improves the blind child´s attitude towards language learning, helping him at the same time to build up his self confidence as well as facilitating his integration in the mainstream classroom.

SCHOOL 2

-Class: 3º de primaria
-subject D (8 year old girl; some light perception)
-textbook: Bingo 1 (Longman)
-unit of work: animals (6 hours)
-tactile experience sheets: 11

Subject D was bright and rather eager to learn. The teacher tried hard to include her in all activities but often failed due to lack of resources. The class was noisy and unruly and the teacher had difficulties controlling them. She readily agreed to alter her lesson plans for this unit of work in order to include the use of the *tactile resource pack* so that the blind girl would integrate better in the English classroom.

Subject D answered questionnaire 1 as follows:

1-¿te gusta aprender inglés?
Sí no
por qué - es bonito
- es divertido

2- ¿te resulta difícil?
sí no **regular**
-lo más difícil
-entender a la profesora
-a veces no sé de qué hablan
-tengo que leer mucho en braille

3-¿crees que aprender inglés puede ser importante para tu futuro?
sí no no sé

Session 1 *(*activities adapted from unit 7 in textbook*).*

1- warm-up: chant from textbook (see appendix II, Bingo unit 7). When EFL teacher put up pictures of the cat and the dog on the wall, the experimenter gave the blind child silhouettes of a texturised cat and dog from *tactile experience sheet* 11 so that she could understand the lyrics.

2- *Listen, point and say*: While sighted children used the visual references in their textbooks to identify the different animals, subject D was given the texturised silhouettes from *tactile experience sheet* 11, which were arranged in the same order of appearance as in the book so that she could do the exercise at the same time as her classmates. She performed the task correctly and seemed to enjoy it.

3- Writing activity: *my favourite animal*. Pupils were asked to write a short description of an animal in English. Subject D wrote hers in braille, which was eventually given to her peripatetic teacher to transcribe.

Session 2 (*activities adapted from textbook and other sources*).

1. warm-up:

   (a) animal chant

   (b) animal sounds: the teacher brought a tape with different animals sounds and the pupils (who were divided into competing teams) had to say the name of the animals in English. This warm-up was very popular with both the sighted group and the blind child.

2. *Making animal cards:* The experimenter brought some toy models of animals in order to point out their main characteristics using an object that the blind child could recognise tactilely. Then she handed out some blank cards and asked pupils to draw each animal adding three dimensional items (eg. Strips of leather for dog´s leash, nylon whiskers for cat, furry ears for rabbit etc). Pupils were instructed to cut out the shapes. The blind child was helped to make and cut out raised line drawings of the animals. She –and the rest of the class- enjoyed doing the collage work on the cards. These tactilely recognisable animal card sets proved to be very useful not only for different activities and games

throughout the unit but also in other occasions during the academic year.

Session 3 (*activities adapted from the course book and from other sources*).

1. warm-up: animal chant

2. revision of vocabulary related to animals through animal cards.

3. Guessing game (in groups): cards of the different animals were displayed. One child chose one secretly and the rest asked *yes/no* questions until somebody guessed right. The blind child had no difficulty participating in this activity as she knew each card quite well by then and therefore could easily identify each animal.

Session 4 *(*activities adapted from textbook and other sources*).*

1. warm up: animal chant

2. S*ing and do "animal mad"* (activity from textbook *Bingo* unit 7). In this exercise students used the texturised animal cards instead of the book illustrations so that the blind pupil could join in.

3. *write and label*: pupils wrote the names of the different animals at the back of each card. The blind child labelled hers in braille.

Session 5

1. warm-up: repeat of *animal sounds*: (tape of different animals sounds that pupils identify in competing teams).

2. classifying animals: the class was divided into groups and each given several sets of their texturised cards. They classified the animals according to their characteristics (big/ medium-sized/ small; domestic/wild; dangerous/ harmless etc). The blind child participated enthusiastically in this activity and was among the quickest learners in classifying the cards.

3- writing activity: pupils wrote short sentences about the animals. Subject D wrote hers in braille and it was kept by the EFL teacher for the peripatetic expert to transcribe.

Session 6 (*activities adapted from the textbook and other sources*).

1-warm-up: *animal chant*.

2-revision of main features of animals: teacher asked pupils about the main features of the different animals and afterwards *yes/no* questions related to animal vocabulary (eg. *Has the snake got a beak? Has the rabbit got 2 legs? etc*). The blind learner was very participative.

3-*Animal Bingo:* the game was played according to the instructions in the textbook but using the texturised cards so that the blind child could join in the activity. Both impaired and non-impaired young learners enjoyed it very much.

Subject D answered the post-activity questionnaire as follows:

1-¿te ha gustado esta unidad didáctica?

Sí no regular

-¿qué es lo que te ha gustado?

-hacer los collages de animales

-los guessing games

-clasificar los animales

-jugar a Animal Bingo

-¿qué no te ha gustado?

- me ha gustado todo pero un poco menos escribir en braille

2- ¿te ha parecido fácil o difícil? **fácil**

-lo más fácil: -hacer las cartas

-clasificar los animales

-lo más difícil -acordarme de todas las palabras de la canción

3-¿crees que te ha ayudado para mezclarte más con tus compañeros?

Sí no

4-¿te gustaría que todas las clases de inglés fueran así?

Sí no

Comments:

This unit of work was particularly easy to adapt for a blind child, as it only required the use of one *tactile experience sheet* (nº 11) and the making of tactilely recognisable animal cards to substitute the photocopies provided by the textbook -an exercise that has proved to be more creative and enjoyable than those usually proposed in course books for not only does it allow for pupils with visual impairments to join in but it also offers sighted children the chance to experiment with their sense of touch, a rare privilege in our highly visual society.

The sighted pupils –who, according to the EFL teacher tended to indulge in disruptive behaviour- were quite co-operative and got deeply involved in the class activities. The blind child integrated well with her peers and had no difficulties whatsoever in performing any of the tasks.

In this case study the tactile learning material facilitated not only the full inclusion of the blind child in the class but it also helped to motivate the sighted group, who were very impressed with the *resource pack* and performed all the touch-related tasks enthusiastically.

SCHOOL 3

Class: 3º de primaria
Subject H (10 year old girl. Very little residual vision- legally blind).
Textbook: Fantastic Fanfare 1. Oxford.
Unit of work: my family, my home (6 hours)
Tactile experience sheets: 5, 6, 9 & 10

Subject H had undergone several eye operations which forced her to be absent from school for long periods of time. She was 2 years older than the other members of the class and mixed very little with them. Although officially she had no additional disabilities, her form teacher claimed she had detected some learning difficulties in the child which the school psychologist attributed to an emotional disorder.

The EFL teacher was sceptical about the efficiency of the tactile learning material but she agreed to altering her lesson plans for this unit of work in order to adapt them for the impaired child.

Subject H´s answers to **questionnaire 1** were as follows:

1-¿te gusta aprender inglés?
Sí **no**
por qué - es aburrido
- no lo entiendo

2- ¿te resulta difícil?
sí no **regular**
-lo más difícil
-entender a la profesora
-no sé lo que tengo que hacer
-escribir

3-¿crees que aprender inglés puede ser importante para tu futuro?
sí no **no sé**

session 1 (*activities adapted from textbook and from other sources*).

1. warm-up: *say and chant* with the course book tape (appendix II, Fantastic Fanfare unit 6). Subject H liked music a lot, so she participated in this activity quite readily. As the EFL teacher had translated the lyrics into Spanish before playing the tape, the children had no problem understanding the words.

2. Introduction to family related vocabulary: *listen and find people in Wizzy´s family.* While the sighted group identified the members of Wizzy´s family in the book illustration, the experimenter introduced *tactile experience sheet* 9 to subject H in order to familiarise her with the new vocabulary. The impaired child liked touching the texturised silhouettes but it was difficult to get her to repeat the English words or to answer questions about her own family.

3. Writing activity: pupils were asked to write a few sentences in English about their families. Subject H refused to use her braille typewriter, so the experimenter let her play with *tactile experience*

sheet 9 & 10 (*the family* and *the family´s clothes*) until the end of the lesson.

Session 2 *(*activities adapted from textbook and other sources*).*

1. *chant and dance*. Children were asked to sing along and dance with the tape (they were already familiar with the lyrics from the previous session´s warm-up activity). The blind girl joined in the activity rather enthusiastically.

2. Art and craft activity *my family cards*: children were given blank cards, crayons, scissors and bits and pieces of different materials (wool, luffa, buttons, pieces of fabric, strips of leather etc) to do collages of their family members. The experimenter had the class agree on stereotypical features that would facilitate the tactile recognition of the different characters so that the blind child could join in the activities with cards (i.e. we agreed that a grandfather would have either a bald patch in his hair, or glasses –made of soft wire- or a walking stick; younger children would be smaller in size than their older siblings; girls would be depicted with long hair and boy with short etc). The sighted children enjoyed this activity

enormously, but the blind pupil was rather passive and it took a lot of encouragement to get her to do the work.

Session 3 *(*activities adapted from textbook and from other sources*)*

1. warm-up *Simon Says* (EFL teacher insisted that she had to do this game at least once a week to insure that the children remembered the words for the different parts of the body and also in order to revise verbs that typically appear in TPR activities. However, the blind child refused to join in).

2. Individual work: *my family tree*. Children were given a large sheet of paper so that they could construct their *family tree* with the collage cards they had made during the previous session. The experimenter helped the blind pupil, who gained enthusiasm as the activity progressed.

.

3. Pair work *who´s this? What´s he/she like?* Learners worked in pairs, asking each other questions about the members of their families. The blind girl was matched to a very co-operative girl who helped her a lot throughout the activity.

Session 4

1. warm-up: *listen and chant* (repeated from session 1).

2. Introduction of vocabulary related to *home*: EFL teacher drew a picture of a house on the blackboard with rooms in it and typical pieces of furniture in each of them. The experimenter introduced the blind girl to *tactile experience sheets* 5, 6 & 7 (*the house*; *the rooms*; *the furniture*) so that she could follow the teacher´s explanations. She thoroughly enjoyed touching, fastening and unfastening the different items, which she recognized rather easily. She seemed mildly more interested in learning the English words than she had been during the previous sessions.

3. Writing activity *my house is...* the pupils were requested to write a few sentences about their homes. Subject H refused to use her Perkins braille writer, so she continued playing with the *tactile experience sheets* until the end of the session.

Session 5 (*activities adapted from different sources*).

1- warm-up: *one potato, two potatoes..* (to revise numbers). The class was divided into 4 teams and the teacher named a captain

for each of them. All the children chanted *one potato, two potatoes, three potatoes, four, five potatoes, six potatoes seven potatoes more* while the captain counted the members of his team and eliminated the child he happened to be pointing at when they got to the word *more*. The last child to be eliminated was the winner of each team. The blind girl joined enthusiastically in the chant.

2- Art and craft activity *draw your home*: children were given A3 sized paper to make a quick sketch of their home. Meanwhile the blind learner worked with tactile experience sheets 5, 6 & 7 (if the blind pupil had been better disposed to the work, she would have been encouraged to make her own *tactile home*, but in her case it would have taken too long).

3- Pair work *how many?* Children were asked to remove their family cards from their *family tree* posters and place them in their home drawings. In pairs they asked each other questions starting with *how many....?* Subject H participated quite actively, but used Spanish instead of English most of the time.

Session 6 (*activities adapted from different sources*).

1- warm-up: chant from tape (repeated from session 1).

2- introduction of new vocabulary: *the furniture*. The teacher had brought her daughter´s doll house to the classroom and taught the pupils the words for the different furniture items by showing them the toy versions. At the experimenter´s request, subject H was allowed to sit by the teacher´s desk so that she could touch each item.

3- Pupils drew some furniture in their *home* posters. Subject H used items from *tactile experience sheet* 7 to furnish her *tactile home*.

4- Pair work *have you got...?* children asked each other questions about the furniture they had in the different rooms. The blind child did this activity surprisingly well.

Subject H answered the post-questionnaire as follows:

1-¿te ha gustado esta unidad didáctica?

Sí no regular

-¿qué es lo que te ha gustado?

-cantar

-tocar los muñecos

-¿qué no te ha gustado?

- escribir en braille

2- ¿te ha parecido fácil o difícil? **regular**

-lo más fácil: -cantar

-poner los vestidos a los muñecos

-lo más difícil -acordarme de todas las palabras en inglés

-pintar las cartas de mi familia

3-¿crees que te ha ayudado para mezclarte más con tus compañeros?

Sí no

4-¿te gustaría que todas las clases de inglés fueran así?

Sí no

Comments: subject H was one of those children with just one identified major disability but who at times seem to be mildly autistic due to their antisocial behaviour and their lack of involvement in the school activities. However, as they are surprisingly responsive at other times, specialists are reluctant to diagnose any particular

psychological disorder and therefore these children are often placed in mainstream educational settings and left almost entirely in the hands of the subject teachers, who are expected to work miracles.

In spite of the fact that the EFL teacher and the experimenter had carefully planned the activities in this unit of work in order to integrate the blind girl into the English classroom, only after lot of patient persuading did subject H agree to perform *some* of the tasks, flatly refusing to even try to do others, such as reading or writing braille. Nevertheless the EFL teacher considered the experiment to have been a great success, claiming that subject H´s behaviour –as well as her attitude towards the English language- had improved dramatically during this unit of work.

It can therefore be concluded that this instructional material helped her become more motivated to learn English and contributed to the development of her social skills, but due to her emotional disorder and unspecified learning difficulties she would require a support teacher to work constantly by her side if she were to take full advantage of school integration.

9.1.4. Conclusion

The purpose of this pilot study was to investigate whether the use of alternative EFL instructional material -specially designed for blind young learners attending mainstreams schools- would improve the impaired pupils´ motivation to learn foreign languages as well as help them integrate better with their sighted peers; unfortunately, the experimenter encountered many difficulties in organizing her fieldwork not only due to the reduced number of visually impaired subjects within the researched age group but also because of the refusal of EFL mainstream teachers to have their classes observed or interfered with in any way. it would have been desirable to have access to a greater number of mainstream schools during longer periods of time in order to draw more definite conclusions concerning tactile EFL instructional material.

However, in spite of the scarcity of data, It can be concluded that this *tactile resource pack* is a very useful tool both in private sessions and in the mainstream English classrooms, provided that the English teacher plans her lessons carefully in order to co-ordinate the work of the blind pupil with that of the sighted group. It had a clearly positive effect upon all 3 participants of the case studies described in

this chapter, including the most difficult one –subject H- whose class participation –practically non-existent up to the experimental unit of work- increased notably.

Educating a child is much more than providing him with a certain amount of academic information; it involves helping him develop his potential as a human being, which first of all requires emotional balance and a general sense of well being (Epstein 1998). In the case of a child with the *special needs* of subject H´s type, the fact that she enjoys a school activity and *actually shares* her enjoyment with other people is a great achievement that contributes towards her holistic growth and which will definitely facilitate her language learning process.

9.2. Pilot Study 2: the dinosaur pack

For this pilot study –whose main objective was to evaluate the effect of this specially designed TEFL material upon the motivation of blind and visually impaired pupils and its efficiency as a promoter of integration- the researcher designed a unit of work called Dinosaurs in English to be used both as an intensive summer course in an integrated or segregated educational setting and as part of the school syllabus.

The experiment took place during a residential summer camp organized by the O.N.C.E in Alicante in July 2002.

9.2.1 subjects

The subjects were 15 children between the ages of 8 and 10 ranging in vision from total blindness to normal sight: 4 pupils had just some light perception, 7 were partially sighted in varying degrees but all affiliated to the O.N.C.E and the remaining 4 were fully sighted. All of them had opted for integrated education except for one totally blind child who attended the special school run by the ONCE in Madrid.

9.2.2. Materials

This unit of work –*Dinosaurs in English*- was originally designed as part of an interdisciplinary school project involving natural Science, language, art, drama, music and English. Thus, it is desirable that the children are familiarised with the historical and scientific aspects of this topic before working on it in the English classroom, as this renders the learning process much easier.

It includes some artistic activities related to music, language, drama and sculpture, as most children learn better when allowed to develop their creative potential (Angoloti 1990; Gardner 1990; Wright 1997). The development of creativity is crucial for cognitive, physical and psychosocial growth, and visual impairments should not impose restrictions, as absence of vision does not imply that the person has in-built limitations in this respect (Shaw 1986).

Special emphasis is given to storytelling and story-inventing, as they are motivating activities that help develop a positive attitude towards language learning (Ellis & Brewster 1991; Wright 1997).

The instructional material pertaining to *Dinosaurs in English* is both tactilely and visually attractive, for it has been designed to meet the needs of totally blind, partially sighted and fully sighted young learners as well as to encourage all three groups of students to mix and co-operate with each other. It consists of the following items:

1- *the dinosaur pack*: A set of cardboard silhouettes of tyrannosaurus rex (sharp teeth), supersaurus (long neck), archaeopteryx (soft wings) and triceratops (3 horns). Each cut-out is made of 3 separate pieces that are fastened with *velcro*. Once mounted, they can be made to stand on a cardboard base. These pieces are clear, coloured shapes easily recognizable by the blind and the visually impaired (eyes, teeth, horns, wings etc are made of textured fabric) and at the same time stimulating for sighted young learners.

2- *The setting: (dinosaur landscape)* fits on a desk sized 130 x 65 cms approximately. A three dimensional toy landscape consisting of:

   a- a mountain (35x23x23 cms): made of painted papier maché with a hole depicting a cave on its slope and a bird´s nest made of luffa on the top.

b- A tree (28x18x15 cms): made of painted papier maché with artificial cloth leaves on its branches. It has several holes with birds´ nests made of luffa in them.

c- A dune (18x20x25): made of natural sand.

d- A lake (25x25x10 cms),: a plastic container, painted and varnished, filled with water, sand, pebbles and natural leaves.

Level: Elementary (8-9 year old blind, visually impaired or sighted learners).

9.2.3. Objectives

a-*Educational*

1. Affective aims: to foster a positive attitude towards language learning and to encourage young learners to wish to continue studying English into secondary school and beyond.

2. Cultural aims: to interest students in the cultures of other countries.

3. Social aims: to get children used to interacting with peers with special needs as well as to working in teams.

4. Cognitive aims:

-to teach learners to search for meaning using context, visual illustrations, tactile illustrations, three dimensional objects, words, sounds... and their existing knowledge.

-to help develop their memory through stories, chants, songs etc.

-to develop their imagination through creative activities (making their own plasticine version of the dinosaurs, inventing a dinosaur story etc).

-To improve the fine motor skills of young learners through assembly activities such as the dinosaur set puzzle (particularly useful for pupils with learning difficulties).

5. Paralinguistic aims: to help children to express themselves better by simple mime and drama techniques; to improve their body language skills.

b- ***linguistic***

1- Skills:

-listening to a story, to instructions, to questions and answers

-asking and answering questions, singing

2- Functions and structures:

-asking for and giving information using yes/no and Wh questions

-giving commands and making suggestions

-making descriptions using the verbs *to be* and *to have*

3- Vocabulary:

-adjectives to describe the different dinosaurs

-parts of the body

-hiding places (learners make dinosaur eggs and hide them in the lake, on top of the mountain etc)

-prepositions: *in/on under/over in front/behind etc*

-numbers

-verbs related to story *(to have, to play, to fight, to eat, to sleep etc)*

4- Pronunciation

-revision of sh/ h/ s sounds through an *animal sound game*

9.2.4. Activities *(6 hours approximately)*

The activities suggested for this unit of work cover the 8 different intelligences described by Howard Gardner and are particularly recommended for a classroom with blind, visually impaired and sighted children.

1- warm up: animal sound games (to practise sounds s/sh/h): learners listen and repeat names of animals starting with these letters with body movements that resemble these animals (horse, snake, shark etc): linguistic/ body kinesthetic intelligence.

2- New language items: learners are introduced to the 4 different dinosaurs, who for practical purposes are named after their main characteristics (long neck, sharp teeth, three horns, soft wings). They are given some basic background information on each of these dinosaurs in English and in Spanish (see appendix VIII). Blind students have access to toy models to touch.

-Introduction or revision of parts of the body and of adjectives related to the body: linguistic intelligence.

-follow up activities:

a- to revise parts of the body: Simon says: kinesthetic intelligence.

b- the dinosaur set puzzle: cardboard dinosaurs are dissembled and all sets mixed up. Pupils find the pieces and assemble their set (they are allowed to ask each other´s help, but in English): spatial/ kinesthetic/ linguistic intelligences.

3-Storytelling: Mamma Long Neck´s Eggs (text in appendix VIII).

-Students make plasticine eggs for their cardboard dinosaurs. -Each team counts their eggs: logical-mathematical intelligence.

-Song: who stole the eggs from mamma´s nest? (Lyrics in appendix VIII). Children learn and sing the song playing simple musical instruments: musical intelligence.

4-Treasure hunt: one pupil hides an egg in the *dinosaur landscape*. The other pupils take turns to ask three yes/no questions and look for it. The first child to find the egg starts the game again: logical-mathematical intelligence (ability to make logical inferences); interpersonal intelligence.

5-Sculpture time: Children make their own story characters in coloured plasticine or in clay. Once finished, they introduce them to their team, describing their main physical characteristics*: spatial/ linguistic intelligences.*

6-Inventing a Dino story: each team invents a story using their own plasticine models as main characters: *linguistic/ interpersonal/ intrapersonal intelligences.*

7-The Dino show: each group performs their Dino show in front of the class: *linguistic/ kinesthetic/ interpersonal intelligences.*

9.2.5. Method

1. questionnaires. Learners were given a questionnaire before and after the course (see questionnaires 3 & 4 in appendix !V)

2. Class diary. The researcher also kept a detailed record of the children´s responses, explanations and comments as they tackled the tasks that shows the range of the strategies used by the impaired learners in order to overcome the difficulties that they were confronting.

3. Record of behaviour and responses. Although the aim of this study is not so much to compare learning abilities of blind and sighted pupils as to evaluate pilot instructional material, I felt nevertheless compelled to keep a brief record of children´s behaviour and responses (adapted from Dimcovic & Tobin 1995) and to compare the results for all three groups: blind, visually impaired and sighted children (see appendix VII).

9.2.6. Procedure

Subjects completed the pre-questionnaire and spent about 10 minutes doing a Total Physical Response warm up that included some phonetic practice (see activity description at the beginning of this section). Then they were introduced to the 4 different types of dinosaurs selected for this pilot study. Blind and visually impaired pupils had the chance to touch toy dinosaurs to identify the special features of each type. Then all children were given a tactile dinosaur set, which they dissembled and assembled again giving the English words for the different parts of the body and the adjectives that best described each of them. The totally blind students took slightly longer

to identify and put together this dinosaur puzzle –touch being a slower sense than sight- but they all accomplished the task successfully and seemed to enjoy the activity.

Then pupils were told the story *of Mamma Long Neck´s Eggs (see appendix VIII*) with an interactive multi-sensory storytelling technique that involves the senses of sight, touch, hearing and smell and where children create some of the objects for the story during the session. For this activity they were divided into groups of 4 (one blind, one sighted and 2 visually impaired children).

The dinosaur landscape –made up of visually and tactilely attractive three dimensional objects- was introduced to the subjects, who were allowed to explore it with their hands. A guessing game followed, where pupils listened to a recording of dinosaur cries from the film *Dinosaur* and matched each sound with one of the 4 types, justifying their choice (they were allowed to speak in Spanish during this game).

Pupils made eggs from coloured plasticine for each of the dinosaurs, and counted them every time the storyteller requested it. The blind learners were allowed to touch all story items in order to follow the action of the story. As the dialogues are very repetitive, the children joined in once they were familiarised with them. The

story was retold twice, and each time the class participation increased; the third time the 4 groups took turns to fill in the words for the dialogues without the help of the experimenter.

The song *Who stole the eggs from Mamma´s nest* (see appendix VIII) was easily learned and all pupils volunteered to play a musical instrument, which, incidentally, the subjects had made themselves in the instrument-making workshop of the summer camp. The treasure hunt was a challenge for the blind students, as they had to tactilely explore each item of the Dinosaur landscape. However, they all enjoyed the activity.

During the tale-inventing session teams were allowed to talk to each other in Spanish to make up their story and decide about the main features of its protagonists, which they made themselves with plasticine. The totally blind subjects took longer than their peers to model their characters, but they produced aesthetically interesting pieces, generally more expressionistic than those of their sighted classmates. This was one of the most popular activities of the course. The experimenter went round the groups to help them put their story into simple English; they were then allowed 15 minutes to rehearse

their Dino shows before performing in front of the whole class. All pupils participated enthusiastically and every group managed to tell their story in English.

9.2.7. RESULTS

9.2.7.1.Questionnaires

a- The pre-questionnaire (questionnaire 3)

		blind	VI	sighted
a- me gusta aprender inglés	si	50%	28.5%	75%
	no	50%	71.5%	25%
b-aprender inglés es importante	si	100%	100%	100%
c-estudio inglés sólo porque me obligan		50%	42.8%	25%
d-quiero sacar buenas notas				
(i)porque mis padres se ponen contentos		75%	71.4%	50%
(ii)porque me siento bien conmigo mismo		25%	28.5%	50%
e-quiero aprender inglés para (los sujetos seleccionan cuantos apartados desean)				
(i)ir a Inglaterra/USA		25%	42.8%	75%
(ii)hablar con gente de otros países		50%	57.1%	75%
(iii)para conseguir un buen trabajo		50%	------	25%
(iv)entender películas, canciones, juegos de internet etc		-----	28.2%	50%

(v)otros: una niña ciega mencionó “para ayudar a la gente”.

f- me gusta la clase de inglés	sí	50%	42.8%	75%
	no	50%	57.2	25%

lo que más me gusta

blind: canciones (75%)
competir y ganar (25%)

VI: canciones (57.2)
Pintar (14.2%)
Leer en tinta (28.4%)

Sighted: actividades artísticas (50%)
Juegos (50%)

		blind	VI	sighted
g- me gusta la profesora de inglés	sí	50%	28.4%	75%
	no	50%	71.4%	25%

porque

blind:
no la entiendo (25%)
es aburrida (25%)
es simpática (50%)

VI:
es antipática (57.2%)
se enfada mucho (14.28%)
me hace mucho caso (28.4%)

Sighted :
hace cosas divertidas (75%)
se enfada mucho (25%)

		Blind	VI	sighted
h- en clase de inglés saco notas	buenas	25%	28.4%	50%
	regular	25%	28.4%	50%
	malas	50%	43.2%	------

i- me gustaría que la clase de inglés tuviera más
(sujetos pueden seleccionar cuantos apartados deseen)

(i)	ilustraciones táctiles	100%	56.8%	50%
(ii)	juegos	100%	100%	100%
(iii)	canciones	75%	56.8%	50%
(iv)	actividades artísticas	75%	71.4%	75%
(v)	se hablara más en inglés	50%	43.2%	75%
(vi)	se hicieran cosas divertidas como por ejemplo:	100%	100%	100%

blind: no sé (50%)
marionetas (25%)
tocar música (25%)

VI: competiciones (28.%%)

Ya lo he dicho (71%)

Sighted teatro (50%)
Ya lo he dicho (50%)

j- En tu clase de inglés ¿hay niños ciegos y videntes?

	Sí	no
Blind	75%	25%
VI	100%	-------
Sighted	50%	50%

k-¿estás contento de que haya mezcla de ciegos y videntes en el aula de inglés?

	Si	no
Blind	----	100%
VI	42.8	57.2
Sighted	50%	50%

¿porqué no?

Blind
-es difícil entender (33.3%)
-la señorita no me hace caso (33.3%)
-los demás niños se ríen y yo no (33.3%)

VI:
-los dibujos son difíciles (14.2%)
-Tardo mucho con el braille y siempre voy retrasado (14.2%)
-Mis compañeros me dicen tonto (28:5%)

Sighted
-la profesora siempre está con el ciego (25%)
-Siempre tenemos que ayudar a la ciega (25%)

-¿por qué sí?

Blind

VI
-estoy con mis amigos y lo paso bien 28.5%)
-mis amigos me ayudan (14..2%)

Sighted
-cuando la señorita está con el ciego lo pasamos pipa (50%)

l- ¿qué piensas de los ingleses?	Blind	-simpáticos (25%) -no sé (25%) -rarillos (25%) -divertidos (25%)
	VI	-buenos (28.5) -majos (28.5) -no sé (42.85%)
	sighted	-raros (25%) -majos (25%) -no sé (50%)

It can be inferred from this questionnaire that the sighted children had a markedly more positive attitude towards learning languages than their impaired peers; this could be explained by the fact that current TELF material is highly visual and therefore hardly adequate for pupils with sight problems. Sighted children also scored higher for intrinsic motivation, as 50% of them claimed that they wanted to get good marks for their own personal satisfaction, whereas the majority of the visually handicapped pupils were more concerned with pleasing their parents (extrinsic motivation). Most non-impaired learners stated that they enjoyed their English class and liked their teacher; however, half of the totally blind and three quarters of the partially sighted showed some discontent; this could also be a consequence of the difficulties that a language teacher encounters when teaching a regular class with one or more blind or

visually impaired learners and no *aide* to supervise the handicapped child. Teachers in this situation usually complain that it is virtually impossible to attend to both groups adequately (Gray 1997; Salinas Fernández 1996). This dissatisfaction is reflected upon the impaired students´ academic results: most of them claim they obtain low marks, whereas 50% of their sighted classmates do well in this subject. As to their preferred activities, blind pupils clearly favour those that involve the senses of touch and hearing, while visually impaired and sighted students feel more inclined towards visually artistic tasks.

The answers to question j –that tackles the children´s degree of satisfaction with educational integration- show that all blind students are discontent with their situation in the English classroom, as they find the instructional materials inadequate and feel isolated from the rest of the group. Half of the visually impaired and sighted children were also displeased; the partially sighted claimed that they found difficulties in interpreting the visual illustrations as well as in keeping up with the pace of the class when they had to read a text in braille; likewise they complained about the attitude of their sighted school mates towards their taking longer to complete tasks. The non-

impaired pupils protests concerned mainly the teacher´s lack of attention to their group; they also seemed weary of having to constantly help the blind student in class activities. The arguments of those sighted children who favoured having peers with sight loss in the class can hardly be used in defence of integration, as they seem to use the presence of an impaired child as an excuse to indulge in disruptive behaviour (*when the teacher attends to the blind child, we have a great time*).

b- Post-questionnaire (questionnaire 4)

		blind	***VI***	***sighted***	
1- ¿Te ha gustado el curso?	*Si*	*100%*	*100%*	*100%*	
	no	*----*	*----*	*----*	
2-¿Qué es lo que más te ha gustado?					
Dinosaur set		*25%*	*28.56%*		*-----*
hacer plastilina		*25%*	*28.56%*		*50%*
esconder huevos		*-----*	*14.28%*		*25%*
cuento		*50%*	*28.56%*		*25%*
3- ¿Qué es lo que menos te ha gustado?					
	Me ha gustado todo		*me ha gustado todo*		*todo*
4- Te ha parecido	*fácil*	*75%*	*100%*	*100%*	
	difícil	*25%*	*------*	*-------*	
-lo más difícil					
entender cuento		*25%*	*-------*	*-------*	
hacer plastilina		*25%*	*-------*	*-------*	
encontrar los huevos		*25%*	*28.56%*	*25%*	
inventar cuento		*25%*	*28..56 %*	*25%*	
nada		*-----*	*42.8%*	*50%*	
1- ¿Crees que has aprendido cosas importantes?					
	Si	*100%*	*100%*	*100%*	
	no	*-------*	*------*	*------.*	

5- ¿Te gustaría que se hiciera este tipo de cosa más en tu colegio?

	Blind	VI	sighted
Si	*100%*	*100%*	*100%*
no	*------*	*--------*	*------*
-Sobretodo			
Figuras táctiles	*25%*	*428.%*	*-----*
Plastilina	*25%*	*28.5%*	*50%*
Música con instrumentos	*25%*	*-------*	*25%*
Inventar cuentos	*25%*	*28.5%*	*25%*

7.¿te ha molestado que haya niños ciegos, disminuidos visuales y videntes en este curso?

Sí	*------*	*------*	*------*
No	*100%*	*100%*	*100%*

The post-questionnaire shows that this experimental course has contributed to the improvement of all the children´s attitude towards the English language. This is probably not just because of the particular instructional materials used, but also due to the fact that the course was an optional activity of a summer camp and therefore the atmosphere was much more relaxed that in the school room; besides, children knew that they would not be evaluated for academic achievements, which is usually a great source of anxiety.

As to the degree of difficulty of the different tasks, most pupils seemed to find them easy to complete and yet challenging enough to engage their full attention. All of them stated that they had learned something important during the course and expressed their wish to do this sort of activities more often at school. When asked whether

they were displeased at having had to share the course with sighted/ partially sighted/ blind peers, all of them answered negatively; consequently, it can be inferred that a change of attitude towards integration had taken place, which could be due to the fact that the proportion of the senses of sight, hearing and touch involved in the activities was much more balanced than is normally the case; thus, while the blind children felt more at ease than usual -the material being less visual than is habitual in integrated educational settings- the sighted had to use their sense of touch to a greater degree, and they found this both challenging and amusing. As none of the tasks presented to the subjects required explicit help from the sighted to the blind –a frequent situation in the integrated school room- the former were able to relax and form a natural friendship with their handicapped peers without developing a condescending attitude towards them, while the latter felt that they could manage the course material and therefore were more confident about their learning capacity; besides, being more familiarised with the sense of touch than their sighted classmates, they were able to assist them in certain tasks, which helped to built up their self-esteem.

9.2-7.2. Brief record of children´s behaviour and responses

Each child was numerically evaluated (numbers 1 to 5, number 5 indicating optimal performance) and the mean results of the 3 groups (the blind, the visually impaired and the sighted) compared. As this evaluation was used exclusively for research purposes, the record was kept without the knowledge of the pupils.

	blind	vi	sighted
2- General understanding of the task	2	3	3.5
3- Task performance	4	3.5	3.8
4- Appropriateness of use of language	3.2	3	2.8
4- pronunciation	4.5	4	4
5- learning progress	2.5	2.9	3
6- co-operation with peers	4	4	5

Overall, there were no significant differences among the groups. The blind learners´ difficulties in understanding the task could be explained by their absence of sight, as body language plays an important role in instruction-giving. In contrast, their relative advantage in task performance was probably due to their being more familiarised with tactile assembly activities than their sighted peers. They also rated higher in pronunciation, which supports Wills´ claim of blind people´s superior performance at precise mimicry (Wills 1979; Dodd 1980).

The sighted obtained top marks at co-operation with peers, as they all volunteered to assist their impaired classmates in tasks where full vision was an advantage. Overall, there was a marked improvement in the general level of co-operation among the three different groups of pupils and their behaviour during the whole course was highly satisfactory.

9.2.8. Conclusion

Apart from dealing with the intrinsic difficulties derived from researching the affective factors of the learning process, the experimenter had to work under rather restrictive conditions, as she was requested not to disrupt the vacational atmosphere of the summer camp by using any kind of evaluation test; furthermore, she only had access to a single group of pupils and was not allowed to separate them according to their visual acuity; in addition, there was no control group to compare results. However, this experience gave the researcher the chance to observe a rather unusual mode of educational inclusion, whereby sighted children

are integrated into a group of blind and visually impaired peers and not the other way round[39].

The main objective of this pilot study was to investigate whether the motivation of blind and visually impaired young learners to learn foreign languages would be increased by the use of multi-sensorial instructional material; it likewise aimed at studying any changes it could cause upon the attitude of both impaired and non-impaired children towards educational integration. It can be concluded that this instructional material is adequate to teach foreign languages to young learners with visual problems as it contains motivational impact to be gained by the senses of touch and hearing as well as by sight. It also takes into account the interests of this particular age group thus increasing the children´s motivation to learn other tongues and fostering a more positive attitude towards other countries and cultures.

It can also be derived from the questionnaires that this material facilitates educational integration as it encourages students to

[39] The Lighthouse inc School for the Blind in New York has been running this sort of integration programme for several years with great success

work in mixed teams and is at the same time challenging for both impaired and non impaired pupils.

In order to obtain more conclusive results, future work to continue this study should include larger samples of subjects as well as a control group of similar characteristics to the experimental team working in the same type of educational setting. Ideally, the experiment would last for at least three months as part of the regular syllabus, thus enabling the researchers to formally evaluate the subjects´ academic achievements and compare them to those obtained by the control group.

10- Conclusions

There is an increasing number of educators who endorse the Aristotelian idea that the purpose of learning reaches beyond the mere conveyance of content information as it is most importantly concerned with *human flourishing* and *personal fulfilment*; thus, broader life goals should underlie the teaching of any school subject (Krishnamurti 1955; Gardner 1993; Goleman 1995; Stevick 1998).

The language classroom seems to be a particularly appropriate setting for the teaching not only of thinking skills but also for the development of the emotional mind as well as of the creative and expressive powers of the learner, as language involves both emotions and cognition and is related to every conceivable topic in the human repertoire; Consequently, the scope of instructional materials that can be used to teach EFL is enormous, covering all the different aspects of cognition as well as the varying learning styles found in the classroom. (Christison 1998).

Current pedagogical practice –especially where young pupils are concerned- advocates the learning of foreign languages in meaningful

contexts through stimulating activities that address both the affective and the intellectual sides of the child and help develop his creative potential. It is beyond the scope of this study to investigate whether this educational objective is met in the everyday reality of Spanish schools; However, modern language textbooks for children –with their attractive, colourful illustrations on subjects particularly appealing to their age group- are a clear moveaway from more traditional, academic methods and an attempt to promote learning through enjoyable activities that help develop the students´ different intelligences.

This thesis focuses on young learners of foreign languages with visual impairments; it aims at determining the impact of blindness upon cognitive development in general and language learning –both mother tongue and second language- in particular. It is also concerned with the *adequacy* of the existing EFL instructional material for pupils with *vision loss* in order to determine whether these children truly enjoy equality of opportunities with their sighted peers in the mainstream English classroom. The experimental work involved in this study required the development of pedagogical material specially designed to enhance the motivation of blind

children towards foreign languages as well as to promote their integration among their non-impaired counterparts.

In order to carry out this research the different types of *visual impairments* had to be investigated together with their impact on cognitive development and on first and second language acquisition; likewise it was necessary to explore the existing educational options for visually deficient pupils in Spain as well as to study the current EFL teaching practice in schools catering for young learners with *sight loss*.

There is a broad interindividual variation among children suffering from *visual impairments*, depending on the disease responsible for the *eye condition*, the amount and type of residual vision, the time of life when *sight loss* occurred, and the child's personality as well as his family background. Thus, the term refers to pupils with a wide scope of limitations and needs and therefore it is not easy to generalize about the consequences of absence of vision on the learning process, particularly if we bear in mind that it is seldom possible to work with more than a small number of blind children with no additional disabilities.

Researchers studying the impact of congenital blindness on language development often obtain divergent results due to the scarcity of quantitative data available as well as to the criteria used when designing experiments, sometimes ill-suited for people with *vision loss.* These discrepancies lead us to the classical philosophical question concerning the role of sensory perception in cognition: to what extent is perceptual experience essential to knowledge? Some researchers contend that visual information affects cognitive development, which in turn conditions language learning, and consequently arrive to the conclusion that blind children are prone to language deficiencies (Cutsford 1951; Swallows 1976; Fraiberg 1977; Dunlea 1989). Others sustain a more vygotskian view of human cognition claiming that there is an interrelationship between the developmental processes of language, cognition and social skills which allow the blind child to compensate for her lack of vision. They claim that language is a particularly interesting area of experience for these children which enables them to acquire knowledge of the external world as well as participate in social interaction and that they consequently pay more attention to it than their sighted counterparts and employ certain processing strategies -such as *modelled speech* and verbal play- to a greater extent (Prizant 1984; Landau 1997;

Pérez Pereira & Castro 1992; Pérez Pereira & Conti-Ramsdem 1999; Elbers & Van Loonvervoorn 1999).

.

Scholars who hold a pessimistic view on the blind child's language development not only disregard the linguistic information language itself provides -which can be used to acquire knowledge about the external reality- but they also underestimate the role played by the other senses in conceptualisation of objects; some researchers argue that tactually gathered information can compensate for *visual deficit* and that sighted children might be using the sense of touch to a greater extent than is generally admitted (Anderson & Olson 1981; Kennedy 1997). In any case, there seems to be a close link between *vision* and *touch*, as blind people are able to appreciate line drawings and other graphic symbols, which points at the ability of the brain to interpret surface edges whether it receives visual input or not. It is said that when blind people are asked to draw their surroundings, they resort to many of the devices employed by the sighted, which some scholars take as a proof that both senses function in a similar fashion (Edman 1992; Kennedy & Erikson 1993; Shimizu, Saida & Shimura 1993).

Hearing also provides important information about the external world, not only related to surrounding space –distance, height, thickness of objects, material they are made of etc- but also to people's emotions and even to their physical appearance (Locke 1997)

.

It is difficult to generalize about the consequences of blindness on language development: while it can cause delays in certain learning processes during early childhood (Fraiberg 1977; Bigalow 1990) at puberty sightless children tend to catch up with their non-deficient peers (Ochaita 1993; Dimcovic & Tobin 1998). At any rate, there are many academically able blind individuals with university degrees engaged in highly intellectual activities who prove that blindness in itself is not a barrier to full cognitive development.

Learning a foreign language -compulsory in the school curriculum of most western countries- should be particularly relevant for the blind student, as it could widen his future professional opportunities. There is no evidence that absence of sight hinders second language acquisition in any way; quite to the contrary, some researchers contend that due to their aural sensitivity and memory

training, blind people tend to be better equipped for language learning than their sighted peers (Kesselman & Snyder 1972; Nikolic 1986). However, the problem lies on the *visuality* of the current instructional material used for teaching foreign languages, especially to young learners. This difficulty does not concern pupils attending *segregated settings*, where teaching techniques are carefully adapted to reduce or substitute the visual element, but it greatly affects children integrated in mainstream schools, who do not benefit from the motivational impact of the visual information and yet are forced to learn about it through tedious descriptions in braille or tape in order to keep up with their class. For these pupils –whose affective aspect is often completely neglected in the foreign language classroom, as they are expected to learn another tongue in a meaningless context and largely through memorizing- English becomes difficult and frustrating and therefore they tend to develop a negative attitude towards this subject. The situation does not only contradict the teaching philosophy underlying the Spanish National Curriculum –which endorses the teaching of foreign languages in a meaningful context through interesting activities and stimulating teaching aids- but also the basic principles of educational integration,

where the right of children with *special needs* to equality of opportunity with their non-impaired peers is defended.

The prevailing educational policy of the last twenty years has been to integrate a maximum of children with sensory, motor or psychic disabilities into the mainstream school system, as this educational option is thought to provide greater opportunities for social integration as well as ensure that the child is offered the same academic possibilities as her sighted counterparts; there are, however, discrepancies of opinion regarding this matter. it is beyond the scope of this study to analyse this issue, which is nevertheless particularly relevant to *modern languages* –a subject that poses serious difficulties for blind pupils attending regular schools due to the highly visual content of the instructional material-. However, from the interviews to EFL teachers and visually impaired learners it can be inferred that there is widespread dissatisfaction about the current situation in mainstream schools, as both educators and pupils feel they lack the necessary means to make integration work.

In order for an educational system to offer equal learning opportunities to visually impaired children, it should provide

instructional materials as stimulating as those available for sighted pupils but adapted to activate their remaining senses.

The aim of this thesis was to verify the hypothesis that when taught through tactile, *whole learner* material, blind children tend to develop a positive attitude towards other languages and cultures, which, in turn, improves their academic performance. As nowadays most of these learners attend mainstream settings, it is also of great importance to determine the way in which the material promotes their social integration in a classroom of sighted pupils. In order to research these questions, two experiments involving children with sight loss enrolled in the second cycle of primary education were carried out. The instructional material used in this fieldwork was specially developed to suit blind and visually impaired young learners attending a mainstream school. It is a learning device that complements the material currently used in the integrated English classroom but it does not substitute the braille version of any particular course book for it intends to serve *every* visually impaired young learner regardless of the EFL text used in his class.

It can be concluded from these experiments that this material is a highly useful tool for TEFL at primary school level as it improves the motivation of these pupils to study languages, it promotes their desire to learn in general and it creates greater opportunities for social interaction between impaired and non-impaired children –not just because it is adequate for group work where blind and sighted pupils team up but also due to the fact that it is visually attractive and therefore non-impaired learners are eager to try it out themselves. Thus, this material not only serves to increase the blind child´s motivation to learn languages but also her sighted peers´;in addtion, it enhances the sightless learner´s self confidence and sense of autonomy as it was designed to solve tasks without having to rely on visual cues –which is often the case with regular textbooks-. Consequently the blind child does not need to depend on the goodwill of her sighted counterparts in order to perform the class exercises and this seems to promote more natural friendships between both groups of learners.

To conclude, learning a foreign language poses no special problems for a blind or visually impaired pupil provided that adequate instructional material and teaching methods are used. The challenge

is much greater in a context of integration than in a segregated school, as our world is markedly geared to visual impressions; thus, blind people are forced to acquaint themselves with visual references –even if they are totally meaningless to them- in order to adjust to our highly visual society. Blind young learners are no exception: they need to conform to a group of sighted children who are taught through highly visual materials.

Some educators claim that the prevalence of visuality has created an unbalance in our system of perception that could be remedied by involving the remaining senses to a greater extent in the learning process of young children; Philips de Herrera suggests that EFL teaching materials at primary school level should be adapted to include more activities involving the sense of touch, hearing and smell not just in order to accommodate the blind learner but also for the sake of the sighted child (Philips de Herrera 1984).

The solution to the problem posed by integration –whose underlying philosophy does not seem to match the everyday reality of mainstream schools- could be found in an individual-centered educational approach where each student´s unique intellectual

proclivities and learning style are carefully assessed and catered for – a teaching practice which, according to Howard Gardner, would be feasible even for large classes in this *age of computers* (Gardner 2001). However, such an educational system –where each student´s special characteristics are acknowledged and accepted, his creativity encouraged and his emotional mind developed- requires well trained, highly resourceful, devoted educators working in a flexible, supportive environment. In Jiddu Krishnamurti´s words:

> *The right kind of education is not possible en masse. To study each child requires patience, alertness and intelligence. To observe the child´s tendencies, his aptitudes, his temperament, to understand his difficulties, to take into account his heredity and parental influence and not merely regard him as belonging to a certain category –all this calls for a swift and pliable mind, untrammelled by any system or prejudice. It calls for skill, intense interest and, above all, a sense of affection; and to produce education endowed with these qualities is one of our major problems to-day (Krishnamurti 1955; 94).*

APPENDIXES

Appendix I

Contents most commonly found in EFL course books for the 3rd and 4th grades of primary education (based on the analysis of Bingo 1 (Longman), Fantastic Fanfare 1(Oxford) and Buzz BBC Primary English.)

1- GREETIINGS AND INTRODUCTIONS

Hello/ hi
Good morning/ afternoon/ night
Goodbye/ see you
What's your name? I am.....
How are you? Fine, thanks.

2- COLOURS: red, green, blue, brown, yellow, orange, purple, pink, grey, silver.

3- NUMBERS: 1 to 100.

4- ANIMALS: bee, bird, cat, chicken, crocodile, dog, elephant, fish, fly, fox, frog, hamster. hippo, horse, kangaroo, ladybird, mouse, owl. penguin, pet, pig, rabbit, rat, reindeer, tiger, tortoise, shark, spider, wolf.

5- OBJECTS:
   a- Home related: home, house, flat, street, garden, kitchen, livingroom, bedroom, bathroom, bed, carpet, table, chair, toilet, bath, shower, cooker, fridge, cupboard, window, door, stairs, tree.

   b- School related; school, classroom, desk, blackboard, shelf, book, workbook, pencil, pen, rubber, ruler, scissors, bag.

c- Leisure and holidays: doll, bike, skateboard, rollerblades, teddy, box, computer game, ball, balloon, kite, racket, television, video, film, toy, car, plane, mountain, beach, see, boat.

6- SEASONS AND WEATHER:: spring, summer, autumn, winter, sun, moon, snow, cloud, sky, rainbow.

7- THE BODY: head, face, eyes, eyebrows. nose, mouth, lips, teeth, hair, ears, body, arms, hands, elbows, fingers, nails, legs, knees, feet, toes.

8- PEOPLE

a-The family: mother, father, children, sister, brother, uncle, aunt, cousin, grandma. Grandpa.

b-Professions and characters: friend, teacher, postman, fireman, milkman, clown, monster, witch, princess, skeleton.

9- CLOTHES: boots, dress, blouse, shirt, skirt, trousers, jumper, coat, socks, T-shirt. boots, shoes.

10-FOOD: breakfast, lunch, dinner, milk, water, cheese, bread, eggs, pancake, orange juice, apple, pear, chocolate, ice-cream, toast, spaghetti, meat, fish. hamburger, chips, pizza, salad, soup.

11-VERBS: brush, clap, close, come, can, dance, draw, drink, eat, find, finish, fly, get up, give, go, help, like, live, love, look, make, open, play, point, see, sing, sit, sleep, speak, stand up, stop, touch, wave, wash.

12-VERB TENSES: simple present, present continuous, negative forms with auxiliary *do,* interrogative forms, commands, introduction to the simple past.

13-ADVERBS: slowly, fast, carefully, yesterday, today, tomorrow, next week.

14-ADJECTIVES: bad, beautiful, best, big, blond, cold, crazy, dark, fast, fat, favourite, funny, good, happy, horrible, hungry, long, loud,

new, nice, old, poor, pretty, quiet, rich, round, scary, silly, short, slow, small, tall, thin, true, wet, young.

15-PREPOSITIONS: in, on, out, up down, behind, in front of, next to, under.

16-PRONOUNS: I, you, he, she, we, you, they/ my, your, his, her, their.

17-QUESTIONS

a-General questions and answers:

-Are you...? Yes, I am/ no I'm not
-Is this your...? yes, it is/ no, it isn't
-Can I have..., please? Here you are
-Do you like...? I like../I don't like..
-Is there/ Are there...? there is.../ there are...
-Have you got...? Yes, I have/ no I haven't.

b-WH questions

-What is this/ what are these? It is../ they are..
-What's number x? It is a ...
-How many..?
-Who's this? This is...
-Who's got..? I have
-How old are you/ is he? He is ....
-What colour...?
-When's....? it is..
-Where's...?

Appendix II

Texts for the tactile interactive storybook

1- Text 1

Level: elementary 2

Title: Tom likes... Tom doesn´t like...

Linguistic objectives

-listen for specific information via statements and instructions
-expressing likes and dislikes (introduction to the auxiliary form does/ doesn´t)
-revision of vocabulary of animals and home related objects

Page 1

This is Tom. He has a big house and a big tree.
He has a small dog and a small cat.
Look! On the tree there is a big snake.
Tom likes the small dog and the small cat, but he doesn´t like the big snake. Do you like snakes?

Page 2

This is Tom´s room. There is a table and there is a bed.
There is a book on the table. How many pages?
There are some sweets on the bed. How many sweets?
Tom doesn´t like books, but he likes sweets!
Do you like sweets?

2- Text 2

Level: elementary 3

Title: Go to bed, Tom! Get up, Tom!

Linguistic objectives

-passive introduction to the genitive
-passive introduction to the present continuous tense
-introduction to direct speech form
-practice of the simple present (affirmative and negative); emphasis on the use of *doesn´t* as auxiliary for negative statements
-revision and practice of commands
-vocabulary items related to *times of the day*, *animals* and *clothing*

page 1

It is night time. Look at the moon.
This is Tom. He is in the garden, playing with the cat, the dog and the bird.
Tom´s mother comes. She says, “Tom, go to bed”. Tom doesn´t go to bed.
Tom´s father comes. He says, “Tom, go to bed”. Tom doesn´t go to bed.
Then he says, “cat, go to bed”. And the cat goes to bed.
He says, “dog, go to bed”. And the dog goes to bed.
He says, “bird, go to bed”. And the bird goes to bed.
He says, “Tom, go to bed”. And Tom goes to bed.

Page 2

It is the morning. Tom is in bed.
Tom´s mother comes. She says, “Tom, get up”: Tom doesn´t get up.
Tom´s father comes. He says, “Tom, get up”. Tom doesn´t get up.
The dog comes in. It says, “wouf, wouf”. Tom doesn´t get up.
The cat comes in. It says, “miow, miow”. Tom doesn´t get up.
The bird comes in. It says, “chip, chip, chip”. Tom doesn´t get up.
The snake comes in. It says, “sssssssssssss”. Tom gets up.

Appendix III

1- Questionnaires

a-Questionnaire 1

1. ¿te gusta aprender inglés?
   ¿por qué?
2. ¿te resulta fácil o difícil?
3. -lo más fácil
   -lo más difícil

4-¿crees que saber inglés puede ser importante para tu futuro?

b-Questionnaire 2

1-¿te ha gustado esta unidad didáctica?
Sí no regular
-¿qué es lo que te ha gustado?
-¿qué no te ha gustado?

2- ¿te ha parecido fácil o difícil?
-lo más fácil
-lo más difícil

3-¿crees que te ha ayudado para mezclarte más con tus compañeros?

Sí no

4-¿te gustaría que todas las clases de inglés fueran así?
Sí no

c- Questionnaire 3 (pre-questionnaire for Pilot Study 2)

Edad
Curso
Sexo
Visión

a- me gusta aprender inglés sí no

b-aprender inglés es importante sí no
¿por qué?

c-estudio inglés sólo porque me obligan sí no

d-quiero sacar buenas notas
(i) porque mis padres se ponen muy contentos
(ii) porque me siento bien conmigo mismo

e-quiero aprender inglés para
(i) ir a Inglaterra/USA
(ii) hablar con gente de otros países
(iii) para conseguir un buen trabajo cuando sea mayor
(iv) entender películas, canciones etc
(v) otros

f-me gusta la clase de inglés si no
porque

g-me gusta la profesora de inglés si no
porque

h-en clase de inglés saco notas buenas regular malas
porque

i-me gustaría que la clase de inglés tuviera más
(vii) ilustraciones táctiles
(viii) juegos
(ix) canciones
(x) actividades artísticas
(xi) se hablara más en inglés
(xii) se hicieran cosas más divertidas, como por ejemplo

j- en tu clase de inglés ¿hay niños ciegos y videntes? sí no
-¿estás contento de que haya niños ciegos y videntes en tu clase? ¿Por qué?

k- ¿qué piensas de los ingleses?

d- questionnaire 4 (post-questionnaire to Pilot Study 2)

Edad
Sexo
Curso
Visión

1- ¿Te ha gustado el curso? Si no

2- ¿Qué es lo que más te ha gustado?

3- ¿Qué es lo que menos te ha gustado?

4- Te ha parecido fácil difícil

-lo fácil

-lo difícil

5- ¿Crees que has aprendido cosas importantes? Si no
¿Cómo qué?

6- ¿Te gustaría que se hiciera este tipo de cosa más en tu colegio?

Si no

Sobretodo

8-¿te ha molestado que haya niños ciegos y videntes en este curso?

Sí no

Appendix IV

Lyrics for the Hoky-poky dance

You put your right foot in
You put your right foot out
You put your right foot in
And you shake it all about
You dance the hoky-poky
And you turn around
That´s what is all about

(in the following verse "right foot" is substituted by "left foot" and then by right/ left "hand", "arm", "leg"; "shoulder", "bottom" and finally "whole self").

Appendix V

Interactive stories invented by children aged 9-11

1- Subject G

This is a snake. In the garden. The dog is asustado. Help! Help, boy! The boy puts sweater. The boy put skirt (laughs). No, trousers. He a boy. Me a boy. He says: out, snake, out! !ala! a la copa del árbol. On the tree. Come, dog. In the bed. Asleep.

2- Subject D

The baby is on table. Want catch cat. The mother come and catch baby. The cat flies away. Buaaaaa! Cries baby. Mother gives him a sweet. Now baby is happy.

3- Subject E

Cat and dog fight por que quieren jugar con el niño. Play ..... boy. The boy comes. Takes the dog. Para un paseo. A walk. Dog happy. Cat sad. The snake in the garden. The cat tiene miedo. Brrrrrrrrrr! Cat goes away.

4- Subject G

The boy jump, jump, jump in the bed. He has a book. He has a ball. Tira the ball. Throws. Throws the book. Eats a sweet. Eats 2 sweets. Eats 3 sweets. He is very happy. The baby has no sweet and buaaaaaa! Cries. Mother catches baby.

Appendix VI

Brief record of children´s behaviour and responses

blind VI sighted

5- General understanding of the task /instructions

6- Task performance

7- Appropriateness of use of language

4- Pronunciation

5- Learning progress

6- Co-operation with peers

Appendix VII

Dinosaurs in English

1.The dinosaur´s basic background

a- Tyrannosaurus rex: (sharp teeth)

Carnivore, ferocious. The strongest of all dinosaurs.

-Size: taller than a double decker and heavier than two elephants put together.

-Special features: enormous head. Teeth sharp and long, as big as a banana (he could have swallowed a human being in a gulp).

-Three sharp, short nails on his feet.

-Food: a dinosaur eater (no interest in eggs).

-Life span: 100 years.

-Habits: they protected their young and taught them how to hunt.

b- Supersaurus (long neck)

-Size: 30 m. Long.

-Special features: very long neck and tail. Very calm.

-Food: acquatic plants.

-Habits: they liked to walk in lakes sticking their heads out of the water.

-They laid eggs but probably did not protect babies.

c-Triceratops (three horns)

-Size: 8 m. Long

-Special features: it had three horns and a very hard beak; enormous jaws.

-Food: it ate plants and leaves.

d-Archaeopterix (soft wings)

-Size: much smaller than the others

-Special features: it could fly. Wings very much like bat´s wings.

-Food: it ate insects and snakes.

2- Song: *who stole the eggs from Mamma´s nest?*

Who stole the eggs from Mamma´s nest?

Who stole the eggs from Mamma´s nest?

(child 1´s name) stole the eggs from Mamma´s nest.

Who? Me?

Yes, you!

Not me!

Then who?

(child 2´s name etc) stole the eggs from Mamma´s nest.

3- Story *"Mamma Long Neck´s Eggs"*

Once upon a time there were four dinosaurs: Mamma Long Neck, Mamma Sharp Teeth, Mamma Three Horns and Mamma Soft Wings. They lived in a valley surrounded by mountains, with a sand dune, a big lake and some trees.

One night they all laid eggs: Mamma Long Neck laid 3 very big green eggs; Mamma Sharp Teeth laid 5 big yellow eggs; Mamma Three Horns laid 7 medium-sized blue eggs; Mamma Soft Wings laid many, many very small red eggs. And then all four mammas went to sleep.

In the morning they went to find food: Mamma Long Neck went into the lake to eat some water plants; Mamma Sharp Teeth hunted animals; Mamma Three Horns looked for some nice green leaves, and Mamma Soft Wings searched for insects and snakes.
When they came back, they all counted their eggs: Mamma Soft Wings had 50 very small red eggs; Mamma Three Horns had seven medium sized blue eggs; Mamma Sharp Teeth had 5 big yellow eggs; but Mamma long neck had **only one** very big green egg.

-Where are my eggs? I had three eggs, and now there is only one!- she cried.

She looked in the water, but there were no eggs.
She looked in the sand, but there were no eggs.
She looked under the tree, but there were no eggs
She looked here, she looked there
But her eggs were nowhere!

-Where are my eggs? –she cried –someone has stolen my eggs! I know! Mamma Sharp Teeth has stolen my eggs!

And she went to see Mamma Sharp Teeth.

-Give me my eggs!- she shouted.

-These are not your eggs!- Mamma Sharp Teeth shouted back – your eggs are green and very big. These are yellow, and smaller. Go away!

And Mamma Long Neck went away.
-I know –she said- Mamma Three Horns has stolen my eggs!
And she went to see Mamma Three Horns.

-Give me my eggs!- she shouted.
-These are not your eggs! –Mamma Three Horns shouted back – Your eggs are green and very big. These are blue, and much smaller. Go away!

And Mamma Long Neck went away.
-I know- she said –Mamma Soft wings has stolen my eggs!
And she went to see Mamma Soft Wings.

-Give me my eggs!- she shouted.
-These are not your eggs- said Mamma Soft Wings- Your eggs are green and very, very big. Mine are red, and very, very small.

Mamma Long Neck was so sad that she cried and cried and cried.
-Don´t cry!- said Mamma Soft Wings –I will find your eggs.

And she went fly, fly, fly in the sky.
She looked here and she looked there,
but the two big green eggs were nowhere:
she looked in the water,
she looked in the cave,
she looked under the tree,
she looked on the mountain,
but there were no eggs!
She looked in the sand,
she looked in the nests,
she looked behind the plants,
but there were no eggs!

And then she saw them, hidden under some green leaves.
She went to tell Mamma Long Neck, and found her sound asleep. And how she snored! Suddenly she got up and walked away. How funny!
She was asleep.. and snoring... and WALKING!

Mamma Soft Wings shouted very loud:

WAKE UP, MAMMA LONG NECK, WAKE UP! YOU WALK IN YOUR SLEEP! THAT IS HOW YOU LOST YOUR EGGS!

Mamma Long Neck recovered her eggs and was very, very happy. *(courtesy of Carola Aikin).*

References

Allwright, R. (1977). “Language learning through communication practice”. *ELT Documents*, 76:3.

Andersen, E. and M. Olson. (1981). “Word Meaning among Congenitally Blind Children”. *Visual Impairment and Blindness* (April).

Angoloti, C. (1990). *Cómics, títeres y teatro de sombras: tres formas gráficas de contar historias*. Madrid: Ediciones de la Torre.

Armstrong, T. (1993). *Seven Kinds of Smart*. New York: Penguin Group.

Arnold, J. (1999). “Visualization: Language Learning with the Mind´s Eye”. In J. Arnold (ED.) *Affect in Language Learning*. Cambridge: Cambridge University Press.

Arter, A. et al. (1999). *Children with Visual Impairments in the Mainstream Setting.* London: David Fulton Publishers.

Berkeley, G. (1709). “An Essay towards a New Theory of Vision.” In D.M. Armstrong (Ed.) *Berkeley’s Philosophical Writings.* New York: Macmillan 1964.

Bigalow, A. (1990). “Relationship between Development of Language and Thought in Blind Children”. *Journal of Visual Impairment and Blindness* (October).

Brown, R. (1973). *First Language: The Early Stages.* Cambridge, Mass: Harvard University Press.

Brown, R. *et al. (1997)*. “Autistic-like Features in Congenitally Blind Children”. *Journal of Child Psychology and Psychiatry*, 38.

Brualdi, A. C. (1996). "Multiple Intelligences: Gardner´s Theory". *Washington DC: Eric Clearinghouse on Assessment and Evaluation.* (Eric Document Reproduction Service No ED 410226).

Bueno Martín, M. and S. Toro. (1994). *Deficiencia visual: aspectos psicoeducativos y evolutivos*. Archidona: Ediciones Aljibe.

Cant, A., M. Charrington and M. Villaroal. (1997). *Guía Didáctica Bingo 1*. Harlow: Longman.

Cantavella, F. et al. (1992). *Introducción al estudio de las esterotipias en el niño ciego*. Barcelona: O.N.C.E.

Christison, M. A. (1998). "An Introduction to Multiple Intelligence Theory and Second Language Learning" in J. Reid (Ed.) *Understanding Language Styles in the Second Language Classroom*. New York: Bentice Hall.

Clark, R. (1974). "Performing Without Competence". *Journal of Child Language,* 1.

Crookes, G. And R. Schmidt. (1989). "Motivation: re-opening the research agenda". *University of Hawaii working papers in ESL*, 8.

Csikszentmihalyi, M. (1990). *Flow. The psychology of optimal experience*. New York: Harper Perennial.

Cummins, J. (1984*). Bilinguism and Special Education: Issues in Assessment and Pedagogy*. Austin, TX: Pro-Ed.

Curran, C. (1972). *Counselling-Learning: a Whole-Person Approach for Education*. Apple River Press: Illinois.

Curran, C. (1976). *Counselling-Learning in Second Languages*. Apple River: Apple River Press.

Cutsford, T. D. (1932). "The Unreality of Words to the Blind". *Teacher Forum*, 4.

Cutsford, T.D. (1951). *The Blind in School and Society*. New York: American Foundation for the Blind.

Damasio, A. (1994). *Descartes` Error: Emotion, Reason and the Human Brain.* New York: Avon.

Dimnovic, M. And J. Tobin. (1998). "The use of Language in Simple Classification Tasks by Children who are Blind". *Journal of Visual Impairment and Blindness* (Sept).

Dodd, A. (1980). "Interaction of Visual and Auditory Information in Speech Perception". *British Journal of Psychology*, 71.

Dorstet, L. (1963). "The Blind Learn Russian in Georgetown University, Washington DC". *New Beacon,* 47.

Dulay, H., M. Burt and S. Krashen. (1982). *Language Two*. Oxford: Oxford University Press.

Dunlea, A. (1989*). Vision and the Emergence of Meaning: Blind and Sighted Children's Early Language*. Cambridge: Cambridge University Press.

Edman, P. (1992). *Tactile Graphics*. New York: American Foundation for the Blind.

Elbers, L. and A. Van Loonvervoorn. (1999). "Lexical Relationship in Children who are Blind". *Journal of Visual Impairment and Blindness* (July).

Ellis, G. and J. Brewster. (1991). *The storytelling book for primary teachers*. London: Penguin books.

Epstain, M. (1998). *Going to pieces without falling apart: A Buddhist perspective of wholeness*. London: Thornsons.

Ferrell, K. (1985). *Reach out and Teach*. NY: American Foundation for the Blind.

Fogel, A. (1997). "Seeing and being seen" in V. Lewis and G. Collis (Eds.) *Blindness and Psychological Development in the Blind Child.* Leicester: BPS Books.

Fonseca, C. (2002). “El uso de la inteligencia musical en alumnos de inglés con nivel intermedio” in C. Fonseca (Ed.) *Inteligencias múltiples: múltiples maneras de aprender lenguas* (in press).

Fraiberg, S. (1977). *Insights from the Blind*. London: Souvenir Press.

Fukurai, S. (1969). *How can I teach what I cannot see?* Kobe: Van Nostrand Reinhold.

Gardner, H. (1982). *Arte, mente y cerebro*. Buenos Aires: Paidós.

Gardner, H. (1983). *Frames of Mind: the Theory of Multiple Intelligences*. New York: BasicBooks.

Gardner, H. (1990). *Art Education and Human Development*. Los Angeles: The Ghetty Center for the Education of the Arts.

Gardner, H. (1993). *Multiple Intelligence: the Theory in Practice*. New York: BasicBooks.

Gardner, H. (1999). *Intelligence Reframed: Multiple Intelligence for the 21st century*. New York: Basic Books.

Gardner, H. (2000). “Project Zero: Nelson Goodman´s legacy in arts education”. *Journal of Aesthetics and Art Criticism*, vol 58:3.

Gardner, H. (2001). “An Education for the Future: the Foundation of Science and Values”. *The Royal Symposium Convened by her Magesty Queen Beatrix*. Amsterdam.

Gardner, R. (1985). *Social Psychology and Second Language Learning: the Roles of Attitude and Motivation.* London: Edward Arnold.

Garialde, K., N. Laquidain and J. Urbina. (1992). “La diferencia como cualidad: la integración de una niña ciega en una clase ordinaria”. *Integración,* 8.

Gattegno, Kaleb. (1975). *On being Freer*. New York: Educational Solutions Inc.

Gattegno, K. (1976). *The Common Sense of Teaching Foreign Languages*. New York: Educational Solutions.

Ginan, H. (1997). "EFL for Students with Visual Impairments". *Journal of Visual Impairment and Blindness*, 91:6.

Gleitman, L. R. (1990). "The Structural Sources of Word Meaning". *Language Acquisition*, 1.

Goleman, D. (1995). *Emotional Intelligence: why it can matter more than IQ*. New York: Bantam Books.

Goodman, N. (1976). *Languages of Art: an Approach to a Theory of Symbols*. Indianopolis: Hackett.

Gray, C. (1997). "Coping with the National Curriculum in Modern Languages: An Equal Opportunities Issue?" (Part one of two). *British Journal of Visual Impairment,* 15:1.

Gray, C. (1998). "Coping with the National Curriculum in Modern languages: An Equal Opportunities Issue?" (part two of two*). British Journal of Visual Impairment,* 16:1.

Guinea i Comas, C. and Codina Mir, M. (1986). "Elementos de reflexión para la integración del niño ciego" in *Jornadas sobre la educación de niños ciegos y deficientes visuales*. Barcelona: O.N.C.E.

Hernández, M. A., M. McHugh and G. Occhipinti. (1997). *Guía Didáctica 1: Fantastic Fanfare*. Oxford: Oxford University Press.

Herranz Tardón, R. and E. Rodriguez de la Rubia. (1989). *Los deficientes visuales y su educación en las aulas de integración*. Madrid: UNED.

Hobson, R. P. et al. (1997). "Autism Revisited: the Case of Congenital Blindness" in V. Lewis and G. Collis (Eds.) *Blindness and Psychological Development*. Leicester: BPS Books.

Hooper Hansen, G. (1999). "Learning by Heart: a Lozanov perspective" in J. Arnold (Ed.) *Affect in language learning*. Cambridge: Cambridge University Press.

Huebner, K. M. (1986). "Foreign languages" in G. T. Scholl (Ed.) *Foundations of Education for Blind and Visually Impaired Children and Youth*. NY: American Foundation for the Blind.

Hume, D. (1758). *An Inquiry Concerning Human Understanding*. Indianapolis. IN: Bobbs- Merrill, 1955.

Kekelis, A. and P. Prinz. (1996). "Blind and Sighted Children with their Mothers: the Development of Discourse Skills". *Journal of Visual Impairment and Blindness* (Sept).

Kennedy, J. M. (1982). "Haptic Pictures" In W. Schiff and E. Fouke (Eds.) *Tactual Perception: A Sourcebook*. New York: Cambridge University Press.

Kennedy, J. M. and Y. Erikson. (1993). "Profiles and Orientation of Tactile Pictures". Paper presented at the Meeting of the European Psychology Society, Tampere.

Kennedy, J. M. (1997). "How the blind draw". *Scientific American* (January).

Kramer, E. (2000). *Art as Therapy*. London: Jessica Kingsley Publishers.

Krashen, S. (1981). *Second Language Acquisition and Second Language Learning*. Exeter: Pergamon Press Ltd.

Krishnamurti, J. (1955). *Education and the Significance of Life*. London: Victor Goilancz Ltd.

Landau, B. (1983). "Blind Children's Language is not Meaningless" in A. E. Mills (Ed.) *Language Acquisition in Blind Children: Normal and Deficient.* London: Croom Helm.

Landau, B. (1997). "Language and Experience in the Blind Child: Retrospective and Prospective". In V. Lewis and G. M. Collis (Eds.) *Blindness and Psychological Development in Blind Children*. Leicester: British Psychological Press.

Larsen-Freeman, D. and M. H. Long. (1991). *An Introduction to Second Language Acquisition Research*. New York: Longman.

Leslie, A. (1987). "Pretence and Representation: the Origins of *Theory of Mind*". *Psychological Review,* 94.

Lightbown, P. and N. Spada. (1999). *How Languages are learned.* Oxford: Oxford University Press.

Locke, J. (1690*). An Essay Concerning Human Understanding***.** A.D. Woozley (Ed.) Cleveland.

Locke, J. C. (1997). "Degrees of Development in Linguistic Freedom". In V. Lewis and G. Collis (Eds.*) Blindness and Psychological Development in Blind Children*. Leicester: BPS Books.

Lozanov, G. (1978). *Suggestology and the Outlines of Suggestopedy*. Amsterdam: Gordon and Breach Publishers.

Lucas, S. A. (1984). "Auditory discrimination and speech production in the blind child". International Journal of Rehabilitation Research*, 7:1.*

Lucerga, R. (1998). *Palmo a palmo*. Madrid: ONCE.

MacDonald, R. (1968). *A Report on Special Intensive Language Courses for the Blind.* Washington DC: Georgetown University Institute for Language and Linguistics.

MacNamara, J. (1972). "Cognitive Basis of Language Learning in Infants". *Psychological Review*, 79.

Marshall, K. J. (1968). "Teaching English to the Blind". *The English Bulletin*, 5:4.

Masó Pino, J., M. García Maestre and J. Fuentes Hernández. (1986). "Educación integrada o residencial: dos alternativas al servicio de los deficientes visuales" in *Jornadas sobre la educación de niños ciegos y deficientes visuales*. Barcelona: O.N.C.E.

Mcginnis, A. (1981). "Functional Linguistic Strategies in Blind Children." *Visual Impairment and Blindness* (May).

Miller, O. (1996). *Supporting Children with Visual Impairments in Mainstream Schools*. London: Franklin Watts.

Miñambres, A. et al (1996). *¿Se pueden tocar los cuentos?* Madrid: O.N.C.E.

Morrissey, W. P. (1931).”Teaching Foreign Languages in Schools for the Blind”. *The Teachers Forum* (Nov).

Moskowitz, G. (1999). “Enhancing personal development: humanistic activities at work” in J. Arnold (Ed.) *Affect in language learning*. Cambridge: Cambridge University Press.

Nagera, B. and A. Colonna. (1965). “The Contribution of Sight to Ego and Drive Development: a Comparison of the Development of Blind and Sighted Children”. *Psychoanalytic Studies of the Child*, 20.

Nikolic, T. (1987). “Teaching English as a Foreign Language in Schools for Blind and Visually Impaired Children”. *Journal of Visual Impairment and Blindness*, 91:6.

Nunan, D. (1989). *Designing Tasks for the Communicative Classroom*. Cambridge: Cambridge University Press.

Ochaita, E. (1993). “Ceguera y desarrollo psicológico” in A. Rosa and E. Ochaita (Eds.) *Psicología de la Ceguera.* Madrid: Alianza Editorial.

Pérez Pereira, M. and J. Castro. (1992). “Pragmatic Functions of Blind and Sighted Children’s Language: a Twin Case Study”. *First Language,* 12.

Pérez Pereira, M. (1999). “Deixis, Personal Reference and the Use of Pronouns by Blind Children”. *Journal of Child Language,* 26.

Pérez Pereira, M. and G. Conti Ramsden. (1999). *Language Development and Social Interaction in Blind Children.* Hove: Psychology Press.

Peters, A. M. (1987). “The Role of Imitations in the Developing Syntax of a Blind Child”. *Text*, 7.

Philips de Herrera, B. (1984). "Teaching English as a Foreign Language to the Visually Handicapped". *Mextesol Journal*, 8:3.

Piaget, J. and B. Inhelder. (1969). *Psicología del niño*. Madrid: Ediciones Morata SL.

Prabhu, N. S. (1987). *Second Language Pedagogy*. Oxford: Oxford University Press.

Priesler, G. (1997). "Social and Emotional Development in Blind Children: a Longitudinal Study" in V. Lewis and G. Collis (Eds.) *Blindness and Psychological Development in Blind Children.* Leicester: BPS Books.

Prizant, B. M. (1983). "Language Acquisition and Communicative Behaviour in Autism". *Journal of Speech and Hearing Disorders*, 48.

Prizant, B. M. (1984). "Towards an Understanding of Language Symptomatology of Visually Impaired Children". In *Proceedings of the 5th Canadian Interdisciplinary Conference for the Visually Impaired Child.* Vancouver.

Rinvolucri, M. (1999). "The humanistic exercise" in J. Arnold (Ed.) *Affect in language learning*. Cambridge: Cambridge University Press.

Salinas Fernández, B. et al. (1996). "Condiciones y actitudes hacia la integración escolar de niños ciegos y deficientes visuales". *Integración*, 21.

Seliger, H. W. and E. Shohamy. (1989). *Second Language Research Methods.* Oxford: Oxford University Press.

Shaw, Rona. (1986). "The Creative Arts" in G. T. Scholl (Ed.) *Foundations of Education for Blind and Visually Impaired Children and Youth*. N Y: American Foundation for the Blind.

Shimizu, Y., S. Saida and S. Shimura. (1993). "Tactile Pattern Recognition by Graphic Display: Importance of 3D information for Haptic Perception of Familiar Objects". *Perception of Psychophysics*, 53: 1.

Schumann, J. H. (1997). *The Neurobiology of Affect in Language*. Malden, MA: Blackwell Publishers.

Simon, M. (2001). "Arts Across the Curriculum". NEA Today, 20: 2.

Slobin, D. I. (1973). "Cognitive Prerequisites in the Development of Grammar" In C. A Ferguson and D. I. Slobin (Eds.). *Studies of Children Language Development*. New York: Holt, Rinehart & Winston.

Snyder, T and M. Kesselman. (1972). "TESL to Blind People". *New Outlook for the Blind* (June).

Sokolow, A. (1978). "Difference in Play and Language Development in a Pair of Blind and Sighted Twin Infants" in *´Help Me Become Everything I Can Be´ Conference in Visually Handicapped Children*. Minneapolis (May).

Spitzberg, K. A. (1997). "Tactile Prehistoric cave installation by Visually Impaired and Sighted Artists". *Journal of Visual Impairment and Blindness* (Nov-Dec).

Springer, S. and G. Deutsch. (1993*). Left Brain. Right Brain*. New York: W. H. Freeman.

Stevick, E. (1980). *Teaching Languages: a Way and Ways*. Cambridge, Mass: Newbury House Publishers.

Stevick, E. (1996). *Memory, Meaning and Method: a View of Language Teaching*. Boston: Heinle & Heinle.

Stevick , E. (1998). *Working with Teaching Methods: what´s at Stake?* Boston: Heinle & Heinle.

Stevick, E. (1999). "Affect in Learning and Memory: from Alchemy to Chemestry" in J. Arnold (Ed.) *Affect in Language Learning*. Cambridge: Cambridge University Press.

Strong, M. (1984). "Integrative motivation: cause or result of successful second language acquisition?". *Language Learning*, 34.

Suzuki, D. T. and E. Fromm. (1964). *Budismo Zen y Psicoanálisis.* Mexico: Fondo de Cultura Económica.

Swallow, R. M. (1976). "Piagetian Theory and the Visually Handicapped Learner". *New Outlook for the Blind* (Sept).

Tilley, P. (1991). *El arte en la educación especial*. Barcelona: Ediciones CEAC.

Tobin, M. (1994). *Assessing Visually Handicapped People: An Introduction to Test Procedures.* London: David Fulton Publishers.

Urwin, C. (1981). "Dialogue and Cognitive Functioning in the Early Language Development of Three Blind Children" in A. Mills (Ed.) *Language Acquisition in the Blind Child: Normal and Deficient.* London: Croom Helm.

Urwin, C. (1983). "Communication in Infancy and the Emergence of Language in Blind Children" in R. Schieffelbusch and J. Pickar (Eds.*) The Acquisition of Communicative Competence.* Baltimore: University Park Press.

Urwin, C. (1984). "Language for Absent Things: Learning from the Visually Handicapped Child". *Topics in Language Disorders*, 20.

Varnon, D. (1997). "Enriching remedial programs with the arts". *Reading and Writing Quarterly: overcoming learning difficulties*, 13.

Vygotsky, L. S. (1930). *La imaginación y el arte en la infancia.* Mexico: Distibuciones Fontamara.

Warren, D. H. (1994). *Blindness and Children: An Individual Differences Approach.* Cambridge: Cambridge University Press.

Webster, A. and J. Roe. (1998). *Children with Visual Impairments: Social Interaction*, *Language and Learning*. London: Routledge.

Wills, H. (1979). "Early speech development in blind children". The Psychoanalitic Study of the Child, *34.*

Wright, A. (1995). Storytelling with Children*. Oxford: Oxford University Press.*

Wright, A. (1997). Creating Stories with Children*. Oxford: Oxford University Press.*