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FOREIGN LANGUAGE LEARNING DISABILITIES

**Theoretical and Practical Tools for English Teachers
in Finnish Upper Secondary Schools**

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Tutkielman tarkoituksena on selvittää lukiossa ilmeneviä vieraan kielen oppimisen vaikeuksia ja antaa sekä teoreettisia että käytännön työkaluja oppimisvaikeuksisten opiskelijoiden kanssa työskenteleville vieraiden kielten (erityisesti englannin) opettajille. Lukiossa ilmeneviin vieraan kielen oppimisvaikeuksiin on yleisesti kiinnitetty vähän huomiota. Koska erityisopetusta ei lukiossa järjestetä, aineenopettajat ovat haasteellisen tehtävän edessä. Ongelmana on myös se, että opettajankoulutus ei ole pystynyt vastaamaan tulevien opettajien tarpeisiin saada tietoa erilaisista oppimisen ongelmista ja niiden ratkomisesta.

Tutkielman teoreettisessa osassa tarkastellaan vieraan kielen oppimista ja siinä ilmeneviä ongelmia viimeaikaisen tutkimustiedon pohjalta. Vieraan kielen oppimisen ongelmiin vaikuttavia tekijöitä ja niiden vaikutusta toisiinsa pyritään selittämään Gardnerin ja MacIntyren sosio-edukationaalisen vieraan kielen oppimisen mallin avulla. Mallissa kielen oppiminen nähdään sosiaalisena tapahtumana, johon vaikuttavat oppijan sosio-kulttuurinen ympäristö, biologiset ja kokemukselliset tekijät sekä oppijan kognitiiviset (älykkyys, kielellinen lahjakkuus, oppimisstrategiat) ja affektiiviset (asenteet, motivaatio, ahdistuneisuus) yksilötekijät. Lisäksi mallissa huomioidaan formaalin ja informaalisen kielenoppimiskontekstin sekä kielen oppimisen kielellisten ja ei-kielellisten seurausten merkitys.

Käytännön osassa esitellään tapoja mukauttaa opetusta paremmin erilaisten oppijoiden tarpeisiin sopivaksi. Ehdotukset perustuvat oppimisvaikeuksia ja vieraan kielen oppimista käsittelevään kirjallisuuteen sekä omaan kokemukseen lukion englannin kielen opettajana. Tärkeänä nähdään positiivisen oppimisympäristön luominen, opiskelijoiden itsetuntemuksen lisääminen ja erilaisten oppimisstrategioiden opettaminen. Lisäksi tehdään ehdotuksia vieraan kielen kuuntelun, puhumisen, lukemisen, kirjoittamisen, sanaston ja kieliopin opettamiseen sekä siihen, miten oppimisvaikeudet voidaan ottaa huomioon koetilanteissa.

Vieraan kielen oppimisesta ja oppimisvaikeuksista tehdään paljon tutkimusta, mutta ongelmana on usein tiedon hajanaisuus ja se, että tätä tietoa ei onnistuta välittämään opettajille ja siten siirtämään opetuskäytäntöihin. Opettajankoulutuksessa tulisi nykyistä enemmän kiinnittää huomiota oppimisvaikeuksien teoriaan ja siihen, miten oppimisvaikeudet voidaan ottaa kielen opetuksessa huomioon. Opettajilta vaaditaan myös erilaisten oppimistyylien ja oppimisstrategioiden tuntemusta sekä kykyä välittää tätä tietoutta opiskelijoille.

Asiasanat: foreign language learning. foreign language teaching. learning disabilities. individual differences. upper secondary school.

CONTENTS

1	INTRODUCTION	6
2	THE SOCIO-EDUCATIONAL MODEL AS A FRAMEWORK FOR FOREIGN LANGUAGE LEARNING DISABILITIES	12
2.1	The Socio-Cultural Milieu	14
2.2	Antecedent Factors	16
2.2.1	Biological Factors	16
2.2.1.1	Age and Gender	17
2.2.1.2	Dyslexia and Language Deficits	18
2.2.1.3	Brain Hemisphere Dominance	23
2.2.2	Experiential Factors	25
2.3	Individual Difference Variables	25
2.3.1	Cognitive Variables	26
2.3.1.1	Intelligence	26
2.3.1.2	Language Aptitude	28
2.3.1.3	Language Learning Strategies	29
2.3.2	Affective Variables	31
2.3.2.1	Language Attitudes	32
2.3.2.2	Motivation	33
2.3.2.3	Language Anxiety	38
2.4	Language Learning Contexts	41
2.4.1	Formal Language Learning Contexts	41
2.4.2	Informal Language Learning Contexts	42
2.5	Linguistic and Non-Linguistic Learning Outcomes	43
2.6	Summary	44
3	FROM THEORY TO PRACTICE	47
4	PRACTICAL IMPLICATIONS FOR TEACHING ENGLISH AS A FOREIGN LANGUAGE	49
4.1	Creating the Basis for Motivated Learning	51
4.1.1	Learning Environment	52
4.1.1.1	Promoting a Positive Learning Environment	52
4.1.1.2	Reducing Anxiety	54

4.1.2	Independent and Motivated Learning	56
4.1.2.1	Language Learning Histories.....	57
4.1.2.2	Goal Setting	58
4.1.2.3	Individual Learning Styles.....	60
4.1.2.4	Learning Strategy Instruction	64
4.1.2.5	Student Responsibility and Independence.....	67
4.1.2.6	Feedback.....	68
4.2	Principles for Foreign Language Instruction	70
4.2.1	Listening	74
4.2.1.1	Core Problems	74
4.2.1.2	Suggested Solutions.....	75
4.2.2	Speaking and Pronunciation	80
4.2.2.1	Core Problems	80
4.2.2.2	Suggested Solutions.....	81
4.2.3	Reading	84
4.2.3.1	Core Problems	84
4.2.3.2	Suggested Solutions.....	84
4.2.4	Writing	90
4.2.4.1	Core Problems	90
4.2.4.2	Suggested Solutions.....	90
4.2.5	Vocabulary.....	92
4.2.5.1	Core Problems	92
4.2.5.2	Suggested Solutions.....	93
4.2.6	Grammar	96
4.2.6.1	Core Problems	96
4.2.6.2	Suggested Solutions.....	96
4.3	Examinations and Evaluation.....	99
4.3.1	Instruction of Test Preparation Strategies.....	101
4.3.2	Instruction of Test-Taking Strategies	102
4.3.3	Selection of Test Tasks	104
4.3.4	Test-Taking Modifications	105
4.3.5	Assessment and Feedback	106
5	DISCUSSION.....	108
	BIBLIOGRAPHY	113

APPENDIXES	126
Appendix 1: Language Learning Histories.....	126
Appendix 2: Personal Study Goals: Course 1	127
Appendix 3: Personal Study Goals: Courses 2–8.....	128
Appendix 4: Learning Style Survey	130
Appendix 5: Brain Hemisphere Dominance and Learning	133

1 INTRODUCTION

Difficulties in foreign languages are common for many upper secondary school students. Yet teacher training provides future teachers with few theoretical and practical tools for treating students with different kinds of learning disabilities. Despite this deficiency in training, teachers are expected to have competence to deal with students with special needs. As there is no special education in upper secondary school, subject teachers are left to face the learning disabilities by themselves without any training. Part of the problem is that learning disabilities are often considered to affect only pupils and teachers in comprehensive school. However, it is possible that learning disabilities do not appear until upper secondary school and usually the difficulties appear particularly in foreign languages (*Luki-työryhmän muistio* 1999: 29).

The goal of this study is to offer information about foreign language (FL) learning disabilities specifically to upper secondary school teachers. The theoretical part concentrates on current research on foreign language learning and learning disabilities from the point of view of linguistics, psychology, pedagogy, and special education, and tries to give an overview on the social nature of both FL learning and the disabilities. The practical part focuses on the teaching practices in the FL classroom and the adjustment of these practices to facilitate the learning of students with learning disabilities. The practical part is based on literature on learning disabilities and their treatment in the FL classroom as well as my personal experience as an English teacher in upper secondary school. The idea behind the study is that FL teachers, particularly English teachers who work in upper secondary school could find the information that they need about FL learning disabilities in one place. The suggestions made in this study are intended to be suitable for the everyday needs of FL teachers, and thus the intention is not to suggest that teachers should do more in order to help disabled students but that they could make some accommodations that could probably benefit all the students. Whereas teaching methods useful for learning disabled students can be applied to students who are not disabled, this does not work the other way around.

Learning disabilities are caused by various factors, which can be neurological, cognitive, or socio-emotional in origin (Deci and Chandler 1986: 588). Language

learning disabilities, in turn, are a wide range of different kinds of difficulties that affect the understanding, production and development of spoken and/or written language (Ahvenainen and Holopainen 1999: 60) and dyslexia is probably the most widely known of them. It is estimated that 20–25 per cent of population have some kind of difficulties with reading and writing and about 10 per cent have more severe difficulties (Hintikka 2003: 18). In upper secondary school, the figure of dyslexic students is estimated to be about 2–3 per cent (Ahvenainen and Holopainen 1999: 62), but the figure varies according to the criteria used. The problems of students with FL learning disabilities are often very similar to those of dyslexics and actually many of them probably have dyslexia. However, dyslexia is not the only cause for FL learning difficulties. The student's motivation to learn, language aptitude, learning strategies, attitudes towards the language, and personality are all factors in language learning (Pitkänen et al. 2001: 81).

The term 'foreign language learning disability' is the key term in this study. It is not, however, easy to define the term. According to Sparks and Ganschow (1995: 236), "language learning occurs along a continuum from very good to very poor FL learners and ... a discrete entity such as a 'FL learning disability', implied in the 'deficit' notion, does not exist". In other words, FL learning disabilities cannot be given a strict definition that would apply in all cases. The difficulties are manifested in many forms and in many areas of language use in different combinations. Thus it is very difficult to draw the line between normal learning and learning that is somehow impaired. The multifaceted nature of FL learning disabilities naturally complicates both identifying and helping students who have them.

Although defining foreign language learning disabilities has proven to be rather difficult, some general characteristics of these disabilities can be given. According to Downey and Snyder (2000: 84), students with FL learning disabilities often have difficulties in spelling, understanding grammar, understanding the teacher, and formulating oral responses. They may also be afraid of being called on, and they often feel that they have to learn too much too fast. They may have a perception that everyone else is "getting it", and they fail although they attend classes and make great efforts to study. Also avoidance of or failure in FL classes is common. In addition to problems in FL learning, students may have difficulties in their native language. When studying the learning histories of students with FL learning disabilities, Downey and Snyder (2000: 84) have found that difficulties in learning to

read, difficulties with phonics, spelling problems, family history of learning disabilities, and intervention during comprehensive school are common. In other words, the students with FL learning disabilities have often been diagnosed as having a learning disability and/or they have received special education services in comprehensive school.

Although problems in FL learning are often noticed in comprehensive school when the first FL classes start, they can also appear later, in upper secondary school, when the quantity and quality of study material becomes more demanding. For some students, the basic skills in English have remained superficial and sometimes nearly non-existent and when new grammar and vocabulary should be acquired at a quicker pace than earlier, they find it difficult to keep up. (*Luki-työryhmän muistio* 1999: 29.) In upper secondary school, helping the students with disabilities can be even more difficult than in comprehensive school because of the fast speed of studying. Also the gap between students who have good language skills and those who have difficulties has grown so wide that it is very challenging for teachers to meet the needs of these heterogeneous groups.

The difficulties in learning foreign languages do not end in upper secondary school. When students move on to study in universities, polytechnics and vocational colleges, they will be faced with these problems again since all these schools have FL requirements. In addition to actual FL courses, students are expected to be able to read course books and write in foreign languages (at least in English). So if students' FL skills are poor, it can be assumed that they will have even greater difficulties.

Being a successful FL learner is vital both during the school years and also later in life. In addition to causing problems with the progress of studies and getting into schools and getting jobs, language disabilities may also affect a person's self-esteem. If the person with a disability does not get the help and information about their difficulties that they need, they may begin to think that the problem lies with their intelligence. As Pimsleur (1980: 1–2) points out, bad memories of the FL classes in school may haunt people through their life and prevent them from getting into situations where using a foreign language would be needed. On the other hand, it is important to note that knowing a foreign language can offer experiences such as enjoying FL literature and communicating with foreign people. So the benefits of knowing a foreign language are not restricted to advancing in life but people may also get experiences which have more to do with their emotional growth. Being able

to learn and use a foreign language is an ability that opens many doors and it should not be denied of people with FL learning disabilities.

A memo composed by a team set by the Finnish Ministry of Education (*Luki-työryhmän muistio* 1999: 37), which deals with dyslexic students, states that teachers should be able to identify different kinds of learning disabilities. Teachers should also be able to recognise students' different learning styles so that they know which teaching and studying methods are suitable for each individual. The writers of the memo (*Luki-työryhmän muistio* 1999: 44) suggest that teacher training should include studies in special education and particularly in dyslexia. It is also suggested that further education in dyslexia should be offered to the teachers of foreign languages.

Teacher training, however, has not been able to meet these requirements. Kaikkonen (2004: 114) found that university students who were majoring in foreign languages and had undergone teacher training felt that they had no tools for facing pupils with learning disabilities. Students felt that they had been trained to teach average pupils and treat pupils as part of the class instead of acknowledging individual differences (Kaikkonen 2004: 99). Students felt that instead of focussing on the present trend of inclusion, the little training they had on special education should have provided information on the theoretical and practical aspects of different kinds of learning disabilities (Kaikkonen 2004: 100). Therefore, since FL teachers are required to have information about FL learning disabilities and since teacher training, as it is now, has not succeeded in educating future teachers about the disabilities, the goal of this study is to try to contribute to the demand for further knowledge of FL learning disabilities.

Although previous research on FL learning disabilities exists, it has primarily focussed on young pupils and/or the beginning stage of FL learning. The issue of FL learning disabilities has also often been dealt from the point of view of special education. For example, Huopala and Ruuttunen (1999) conducted a case study in which they studied the foreign language learning of two dyslexic pupils in comprehensive school. Their study was special educational involving personalised teaching in the pupils' homes. Studies concentrating on young students and/or using special educational perspective naturally give good pointers for FL teachers. However, they do not meet the needs of mainstream education aimed at older students.

Studies have also often concentrated on just one aspect of FL learning. For example, Opas and Paloheimo-Pikkarainen (2001) studied how dyslexia appears in upper secondary school by comparing the matriculation examination essays of 50 dyslexic and 50 non-dyslexic students. Thus, their study concentrated primarily on problems in writing. Pirjo Kohonen (2003) dealt with the issue of dyslexia and learning to read in English as a second language focussing mainly on the theoretical and empirical findings about dyslexia and reading. While studies concentrating on one language skill naturally provide important information on certain specific areas of FL learning, they do not consider the comprehensiveness of the disabilities and the fact that the teacher needs to take the students' individual learning profiles into consideration in all the areas of language learning.

The most comprehensive view on dyslexia and the FL learning disabilities of Finnish learners from a pedagogical point of view has probably been offered by Moilanen who has dealt with the issue in a number of articles (Moilanen 2000a, 2000b, 2000c, 2001a, 2001b, 2004a, 2004b) and a book (Moilanen 2002). His approach is very practical and based on observations and experience in teaching students with learning disabilities. Although he has given many useful suggestions for both dyslexic students and their teachers, I feel that he has perhaps too much concentrated on the learning of the language and has not sufficiently acknowledged the social nature of language learning. Also, he has not focussed on any particular age group. Thus, I feel that there is a need for a different kind of approach. First of all, I see that there is a need for a more comprehensive view which does not only focus on the linguistic aspects of FL learning but sees the FL learning situation in a more complex way. Second, there is a need for specified information on the effects of FL learning disabilities on students and teachers in the upper secondary school setting. Studying in upper secondary school differs from studying in comprehensive school in many respects and this aspect should be taken into consideration when carrying out support measures.

In Chapter 2, the socio-educational model of second-language learning (Gardner and MacIntyre 1993) is used as a framework for discussing the various factors that operate in the language learning process and particular attention is paid to the findings associated with students with FL learning disabilities. Chapter 3 acts as a bridge between the theoretical framework and its practical implications for everyday school practices. In Chapter 4, the focus is directed to the practices which have been

found useful in teaching students with FL learning disabilities. In Chapter 5, the implications of previously discussed issues are reviewed and the practical contribution of the study is discussed. Some suggestions for areas of further research are also made.

2 THE SOCIO-EDUCATIONAL MODEL AS A FRAMEWORK FOR FOREIGN LANGUAGE LEARNING DISABILITIES

When foreign language learning disabilities are discussed, it is common that the disabilities are seen solely as cognitive deficits affecting the students' information processing abilities and the complex nature of FL learning situations is overlooked. In my view, in order to be successful in helping the disabled students, the whole experience of FL learning needs to be considered. It is necessary to see the FL learning context as a whole in which the cognitive deficits may play just one part, and acknowledge the fact that there are a great number of other factors that need to be considered. Therefore there was a need to find a framework of FL learning that would account for the role of social factors in language learning and include both cognitive and affective variables.

Ellis (1994: 230) lists three social models of second-language learning: Schumann's (1978) acculturation model, Giles and Byrne's (1982) inter-group model, and Gardner's (1985) socio-educational model. Both the acculturation model and the inter-group model attempt to specify a set of socio-psychological factors that determine how successful individual learners will be, and both models use these factors to describe "good" and "bad" learning situations (Ellis 1994: 235). However, both models were established to account for the acquisition of a second language by immigrants in majority language settings, and they specifically exclude learners who receive formal instruction (Ellis 1994: 230).

Gardner's (1985) socio-educational model of second-language learning, in turn, was developed to explain second-language learning in classroom settings, in particular the foreign-language classroom. A second language is a language which is studied in a setting where that language is used in everyday communication whereas a foreign language is a language which is studied in an environment where it is not the primary vehicle for daily interaction. Therefore, the socio-educational model attempts to provide a comprehensive interpretation of particularly foreign-language learning as opposed to the other two models that attempt to describe second-language learning. The socio-educational model also broadens the scope of possible variables affecting FL learning by including both cognitive and affective factors and thus

provides a good way of understanding the problems of students with FL learning disabilities in a more detailed manner.

There are other models of second-language learning that come quite close to Gardner's (1985) socio-educational model. For example, Spolsky's (1989) model of second-language learning is very similar to Gardner's model, differing only in the details of the theory. Naiman et al. (1978) and later Skehan (1989) proposed a model of good language learner that acknowledges the range of potential influences on language learning success. However, since Gardner's (1985) model is considerably better-known and thus empirically more tested than any of these models, it was found the most useful for the purposes of this study.

The socio-educational model was originally derived from a social psychological model proposed by Lambert (1963). Both the word 'learning' and 'acquisition' appear in the name of the model, but for the sake of consistency, the word 'learning' is used throughout this study. This is considered necessary because the terms often have different meanings. For example, Krashen (1982: 10) proposes that language learning is conscious knowledge of language rules and derived from formal instruction whereas acquisition occurs unconsciously and spontaneously and arises from naturalistic language use similar to native language acquisition. However, since it has been suggested that a learning-acquisition continuum is more accurate than a dichotomy in describing how language abilities are developed (see for example Oxford 1990: 4), such a distinction is not made in this study and the term 'learning' is used to refer to both learning and acquisition.

In this study, Gardner and MacIntyre's (1993) revised version of Gardner's (1985) model is used and it is presented in Figure 1. In the revised model, the different variables affecting FL learning and their relationships to one another have been clarified. Gardner and MacIntyre's (1993) model has five major components: the socio-cultural milieu, antecedent factors, individual difference variables, language acquisition contexts (from now on referred to as language learning contexts), and language learning outcomes. Antecedent factors include biological and experiential factors and individual differences variables cognitive variables (intelligence, language aptitude, and language learning strategies) and affective variables (language attitudes, motivation, and language anxiety). In addition, language learning contexts are divided into formal and informal and language learning outcomes into linguistic and non-linguistic. The solid arrows in Figure 1

represent the effect of a factor on other factors in the model. The dotted arrow from motivation to informal contexts indicates that only motivation has a direct role in the informal context. The indirect effects of the other variables on informal contexts are shown by the broken arrows. All the factors presented in the model are discussed in more detail in the following sections paying attention to their role in the lives of students with FL learning disabilities.

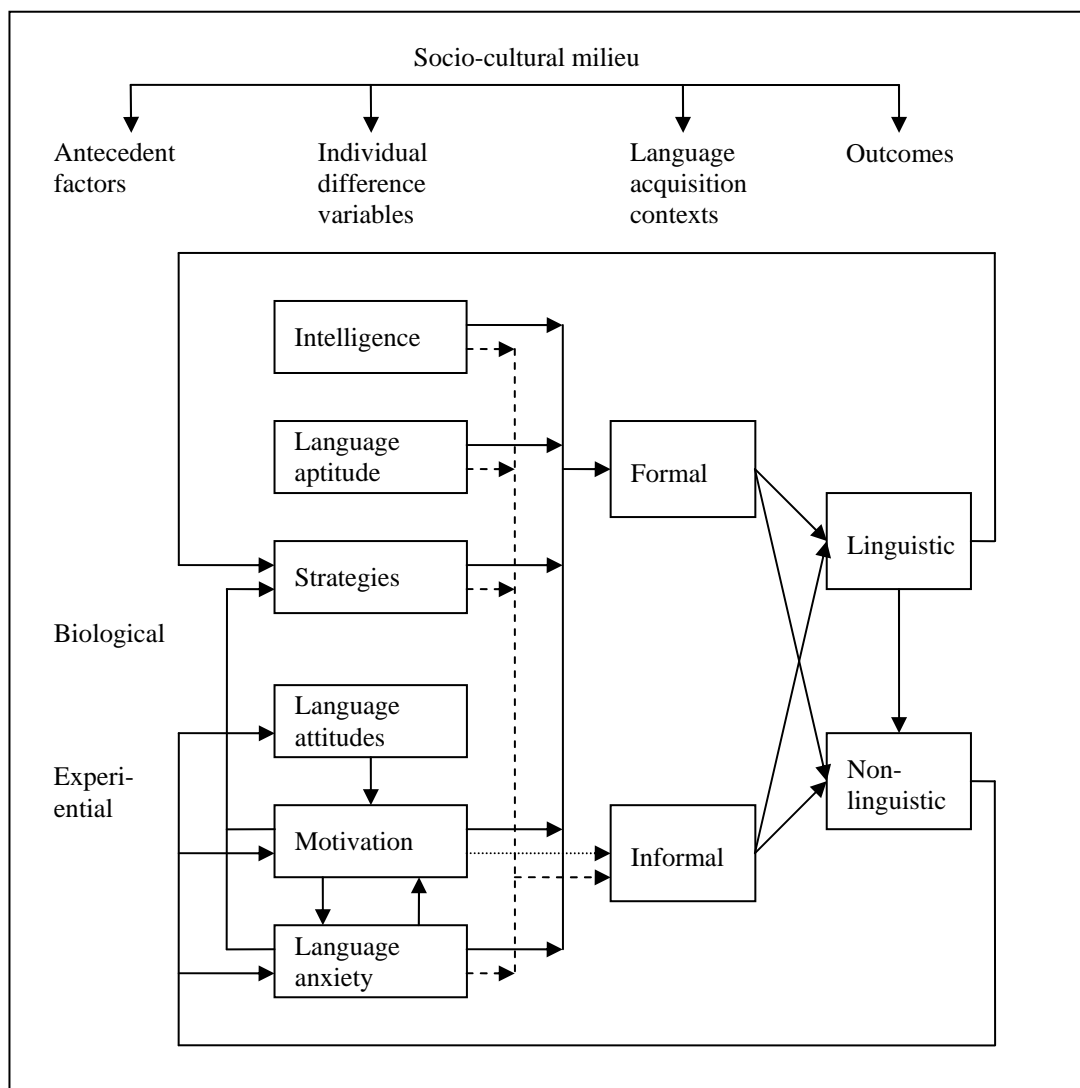


Figure 1. Schematic representation of the socio-educational model of second-language learning (Gardner and MacIntyre 1993: 8).

2.1 The Socio-Cultural Milieu

The socio-cultural milieu, in other words, the social context in which learning takes place is shown as over-riding all the other aspects of the socio-educational model

(Gardner and MacIntyre 1993: 7). According to Gardner and MacIntyre (1992: 212), the socio-cultural milieu includes the cultural beliefs which exist in the community and which concern issues associated with learning the language. Gardner and MacIntyre (1993: 7) see that close attention should be directed to the social context and its influence on individual differences in FL learning.

Gardner et al. (1999: 422) point out that the socio-cultural milieu can influence individuals' levels of attitudes, motivation and anxiety as well as the relative importance these attributes play in the FL learning process. According to Gardner et al. (1999: 422), the socio-cultural milieu can be as broad as the community in which individuals live or as narrow as individuals' experiences in the home. In other words, individuals' early experiences in a specific socio-cultural context can be expected to play a role in the development of their attitudes and motivation associated with FL learning (Gardner et al. 1999: 422).

Gardner et al. (1999) found that there are direct links between the socio-cultural milieu as reflected in early experiences in FL learning and current attitudes about language learning. They found that early socio-cultural experiences such as attitudes toward the learning situation, motivational intensity, anxiety, and parental encouragement tend to be correlated with one another and have direct effect on subsequent attitudes and beliefs. Thus Gardner et al. (1999: 434) conclude that language attitudes are sensitive to the contextual conditions of the learner's environments. Their study (Gardner et al. 1999) demonstrates the importance of early contextual factors and their influence on current attitudes, motivation, and perceived FL proficiency.

Gardner et al. (1999: 422) report studies which have demonstrated a positive relationship between the student's perception of parental encouragement and motivation to learn a foreign language. Gardner (1985: 110) sees that parents can play either active or passive roles in their children's language learning process. When parents encourage their children to work to learn the foreign language, they can also display attitudes which indicate that they value FL learning. On the other hand, not all parents are active in encouraging their children to learn foreign languages, and even those who are, can inadvertently express negative attitudes towards the target language community (Gardner et al. 1999: 423).

The significance of the social context seems to be particularly important for students with learning disabilities. Deci et al. (1992: 469) suggest that support of

autonomy in the home and classroom environments along with involvement on the part of the significant adults, promotes greater internal motivation, achievement, and adjustment in learning disabled students. Also Gardner et al. (1996: 258), who have studied intelligence and the question “who does well in school”, maintain that if a student’s parents and teachers have high expectations and expect one to do well, the student is more likely to do well. On the other hand, as Härkönen (2001: 8) points out, upper secondary school is often seen as a ladder which leads to higher education and success, and thus it can be difficult for students and their parents and even for teachers to admit that the student is having trouble and needs special support.

Another factor which has been found to be an important determinant of foreign language achievement is the relative presence of the FL group in the community (Gardner et al. 1999: 423). Gardner et al. (1999: 423) report studies in which the students’ degree of contact with the FL group has been found to have an influence on the extent to which the language is learnt. However, it has been suggested that in monolingual communities (which is the case in most parts of Finland), other contextual aspects such as the learning situation and parental encouragement may play a greater role in the student’s motivation and achievement (Gardner et al. 1999: 423).

2.2 Antecedent Factors

Antecedent factors are seen as an important foundation for the individual difference variables in the socio-educational model (Gardner and MacIntyre 1993: 8). They include biological factors (for example gender and age) and experiential factors (for example prior language training). Gardner and MacIntyre (1993: 8) point out that it seems reasonable to propose that there is a biological basis for intelligence and that prior FL learning experiences might influence language attitudes, motivation, and anxiety. Next, these two types of antecedent factors are examined more closely.

2.2.1 Biological Factors

According to Gardner and MacIntyre (1993: 8), biological factors in foreign language learning include aspects such as age and gender. In the following section, in

addition to the effects of age and gender, also the effects of dyslexia and brain hemisphere dominance on language learning are discussed. Dyslexia and brain hemisphere dominance have not usually been discussed within the socio-educational model but they are factors that clearly have an influence on the learning of students having difficulties in foreign languages. Dyslexia and brain hemisphere dominance are seen as biological antecedent factors because they both clearly have a biological basis.

2.2.1.1 Age and Gender

There are numerous studies on the effects of age on FL learning. However, researchers have often arrived at different conclusions and thus there are not many issues that would be agreed on (Ellis 1994: 491). In spite of this controversy, some common views can be presented.

There seems to be substantial support for the existence of a critical period in FL learning (Ellis 1994: 492). According to the critical period hypothesis, there is a critical period during which native-like levels of FL proficiency can be attained, at least for pronunciation (Larsen-Freeman 2001: 13). The end of this critical period is found to coincide with the time of the onset of puberty. When child and adult learners have been studied, it has been found that child learners are more likely to reach higher levels of attainment in both pronunciation and grammar than adult learners (Ellis 1994: 492). Adult learners, on the other hand, have been found to proceed through early stages of grammatical development faster than child learners (Ellis 1994: 491). According to Ellis (1994: 494), there are numerous reasons for these differences. The language learning capacity of adults has been found to be impaired by deterioration in their ability to perceive and segment sounds in a foreign language. It has also been found that changes in the neurological structure of the brain at certain ages affect learners' abilities to learn FL pronunciation and grammar. Child learners also usually suffer less from anxiety about communicating in the foreign language than adults.

However, there are also contrary beliefs. For example, Lundberg (2002: 168) proposes that older students are better FL learners due to their greater cognitive maturity. Stronger native language proficiency and higher linguistic awareness of older students also translates into better FL learning (Lundberg 2002: 169). Even so,

Lundberg (2002: 169) admits that the phonological and prosodic aspects of foreign language can be acquired with ease and efficiency at an earlier age.

Gender, on the other hand, may also have some effects on students' learning. According to Ellis (1994: 203), female learners often have more positive attitudes to learning a foreign language than males. Green and Oxford (1995), Bacon (1992), and Nyikos (1990) have found that there are gender-related tendencies in utilising specific types of learning strategies. Green and Oxford (1995: 291) point out that the gender differences in strategy use suggest that women and men use different approaches to language learning, which could be related to underlying learning styles, motivations, and attitudes. Nyikos (1990: 285) suggests that socialisation factors have an influence on the way men and women process similar information. Men usually prefer visual-spatial processing whereas women have better verbal and communicative abilities. Nyikos (1990: 285) points out that socially held attitudes can negatively affect the confidence that learners depending on their gender place in their own learning abilities. Nyikos (1990: 285) argues that allowing for individual modalities and learning styles to operate in the FL learning process can lead to positive results.

On the whole, age and gender seem to be factors that probably need to be considered when explaining the differences between individuals in FL learning. In this study, which focuses on upper secondary school students (aged 15 to 19), age does not explain differences between students. Naturally age is still something that the teacher needs to consider when planning lessons. Students are not children any more but they are not exactly adults either. Gender, on the other hand, seems to have an affect on how students typically approach language learning and so it could potentially cause differences between female and male upper secondary school students.

2.2.1.2 Dyslexia and Language Deficits

The biological basis of learning disabilities is an acknowledged but not completely clear matter. The most interest has probably been focussed on dyslexia and its causes. According to its cause, dyslexia can be divided into developmental and acquired dyslexia. Developmental dyslexia is caused by some kind of congenital structural deviation which causes difficulties in learning to read and write. These

difficulties generally have a neurological basis which is connected to hereditary factors. Acquired dyslexia is caused by some external factor. For example, damage in the central nervous system caused by an accident, the shortage of linguistic stimuli and even a wrong teaching method when learning to read can be causes for acquired dyslexia. (Ahvenainen and Holopainen 1999: 66.)

Subtle differences have been found between dyslexics and non-dyslexics in the structure and functioning of the brain, particularly in brain areas which are prominent in the process of learning language and reading (Bakker 1998: 21). Lyon et al. (2003: 2) see that dyslexia is characterised by difficulties with accurate and/or fluent word recognition. It has been suggested that dyslexic people differ from the so-called normal readers in the functioning of the orthographic (direct) and phonological (indirect) routes which are used in reading (*Luki-työryhmän muistio* 1999: 9). In orthographic reading, people identify words or parts of words as wholes as if they were pictures. This is the way in which familiar words are usually read. In phonetic reading, people convert the letters of a word (graphemes) to sounds phoneme by phoneme and combine them as a word in their minds. Unfamiliar words are usually identified phonetically. So these two routes operate simultaneously when we read. It has been suggested that dyslexic people have deficits in these two routes or the routes are different from the routes of average people. (*Luki-työryhmän muistio* 1999: 9.)

In this dual route theory, phonological coding, in other words the grapheme-phoneme conversion, is viewed as an earlier and slower strategy for recognising words (Pennington 1999: 633). As Pennington (1999: 633) points out, normally children pass through this stage and acquire the more mature strategy of direct orthographic coding. However, people with reading problems are stuck at different points in the sequence of stages (Pennington 1999: 633).

Aaron et al. (1999: 131) indicate that some individuals with adequate phonological skills could still be poor readers because of either weak comprehension skills or slow word-reading speed. Lehtola and Lehto (2000) found that particularly slow reading was typical for Finnish dyslexics in upper secondary school. Leinonen et al. (2001: 289), in turn, suggest that slowness may impair the quality of orthographic coding.

In addition to reading, dyslexia is also characterised by difficulties in spelling (Lyon et al. 2003: 2). This is due to the problems in phonological and orthographic

processing skills. Additionally, people with dyslexia often have problems recalling words fast, and weaknesses of linguistic memory (Marttinen et al. 2001: 23), particularly of phonological memory (Dufva and Voeten 1999: 332). Dyslexia can also appear as difficulties in perception and motor skills, and dyslexic people may have difficulties in concentrating, they may be overactive, have a short attention span or have difficulties in planning and implementing things independently (Moilanen 2002: 11). Thus the learning difficulties that we call dyslexia are often very diverse combinations of different kinds of learning difficulties.

Since there are people who have difficulties in either word recognition (phonological and/or orthographic coding) or comprehension skills or in both, different kinds of subgroups of dyslexics have been suggested. Making these categorisations and investigating the core problems of each individual dyslexic is important in order to arrange appropriate support measures.

It has also been suggested that dyslexia can occur with varying degrees of severity (see for example Miles et al. 2003). According to Miles et al. (2003: 351), some people may be “mildly dyslexic” or having “dyslexic tendencies”, which does not mean that they could not suffer considerable hardship if their needs are not taken seriously. The problem with people who have mild dyslexia is that if they are not classified as dyslexic, they are not entitled to the allowances allocated to those who have been diagnosed as dyslexic (Miles et al. 2003: 353). Another problem, according to Miles et al. (2003: 353), is that there are probably people whose learning problems did not show up earlier in their schooldays, but do appear in a more demanding environment. After comprehensive school upper secondary school is often just this “more demanding environment” for many students (see for example Kosonen 1992).

Studies on individual variation and difficulties in foreign language learning have mostly overlooked the possibility that there might be biological factors behind the individual differences and some of the students having difficulties in FL learning might actually have a learning disability (Sparks and Ganschow 1991: 3). However, studies show that students with difficulties in their native language also face problems in learning a foreign language (see for example Dufva and Voeten 1999, Ahonen 2005). Sparks and Ganschow (1991: 3) see that students who experience difficulties learning a foreign language may have native language problems that affect their FL learning. Sparks and Ganschow’s basic assumption is crystallised in

their Linguistic Coding Deficit Hypothesis (later changed into Linguistic Coding Differences Hypothesis, LCDH) (Sparks and Ganschow 1991). The LCDH (Sparks and Ganschow 1991) relies on the following assumption:

FL learning ... is enhanced or limited by the degree to which students have control over the phonological, syntactic, and semantic components of the linguistic code. A deficiency in one or more of the components is likely to affect the student's ability to learn a FL. (Sparks and Ganschow 1991: 10.)

In other words, Sparks and Ganschow (1991) see that there are innate individual differences in students' ability to use language. In phonological processing, there may be problems in auditory discrimination and blending of sound elements, memory for sound elements, sound/symbol code deficiencies, spelling problems, and auditory distractibility (Sparks et al. 1989: 191). In syntactic processing, there may be problems involving understanding grammatical rules, constructing grammatical sentences, tenses, appropriate word usage, prefixes, suffixes, and problems involving short-term auditory memory for structured language and verbal inflexibility (Sparks et al. 1989: 191). In semantic processing, there may be problems in vocabulary knowledge, word retrieval, semantic referencing, understanding multiple meanings of words, inferences, understanding and using cohesive ties, and managing different language formats (Sparks et al. 1989: 192). Sparks et al. (1992a: 150) suggest that students with FL learning disabilities have difficulties primarily in the phonological and syntactic components of language. According to Sparks and Ganschow (1991: 10), also verbal memory differences may account for the quality and speed by which an individual gains access to the linguistic codes. Sparks and Ganschow (1991: 8) suggest that the reason why the difficulties do not appear until in adolescence or adulthood for some people is that the native language problems may be so subtle that only when these people are faced with the demands of the study of a new and unfamiliar symbol system, they begin having problems. This idea is supported by the suggestion of Miles et al. (2003) pointed out earlier that some people may be "mildly dyslexic". All in all, Sparks and Ganschow (1993: 59) see that the problems of students with FL learning disabilities are similar to those of students with dyslexia.

Since first establishing the LCDH in 1991, Sparks and Ganschow have conducted several studies dealing with FL learning disabilities (see for example Ganschow et al. 1998 for review, or a more recent study by Sparks 2001). Support

for their hypothesis has been found in various studies (Dufva and Voeten 1999, Ganschow et al. 1991, Sparks et al. 1989, Sparks et al. 1992a, Sparks et al. 1993, Sparks and Ganschow 1993, Sparks and Ganschow 1996).

In addition to seeing the student's native language proficiency as a basis for FL learning, there are also studies which suggest the orthography of the language has an effect on the language learning outcomes. The consistency between graphemes and phonemes in the language has been found to have an effect on how easy or difficult it is to learn to read it (see for example Aro and Wimmer 2003, Lehtola and Lehto 2000). It has been indicated that the acquisition of accurate phonological coding poses less of a problem in regular orthographies such as Finnish compared to more irregular orthographies such as English (Aro and Wimmer 2003: 623).

Although the initial acquisition of phonological coding is easier in languages with regular orthographies, many dyslexic students whose native language has regular orthography continue to have phonological coding problems. Actually it has been suggested that students with weak phonological coding skills may have even more difficulties in languages with regular orthographies. Miller-Guron and Lundberg (2000) have studied dyslexic students who prefer to read in English as opposed to their native language Swedish. They suggest that the underlying cause for this preference lies in the difference between the orthographies of English and Swedish. Early reading instruction in languages with highly transparent orthographies, where there is a high consistency between graphemes and phonemes (such as Swedish and Finnish), tends to focus on sounding out the words phoneme by phoneme (Miller-Guron and Lundberg 2000: 45). This causes problems for students with weak phonological skills. Thus, they may develop a preference for deeper, non-transparent orthographies, where grapheme-phoneme relationships are inconsistent, and employ word recognition skills based on larger orthographic structures, a method which is less affected by phonological processing difficulties (Miller-Guron and Lundberg 2000: 45). In other words, Miller-Guron and Lundberg (2000: 46) propose that students with weak phonological processing skills may operate on a super-segmental level where they can use higher order, rule-based structures.

This view is supported by Rack (1997) who sees that with increasing reading experience, readers may employ ways to compensate for poor reading and spelling. Thus dyslexic people may develop ways to compensate for their phonological coding difficulties and thus be better readers in a language other than their native language.

Butterworth and Tang (2004) hold similar views and see that brain functioning and structure are moulded by experience and thus learning a regular spelling system creates differences in brain organisation compared with learning a highly irregular spelling system. Thus, Butterworth and Tang (2004: 3) propose that it is possible to be dyslexic in one language but not another. According to Butterworth and Tang (2004), dyslexia has a universal basis in the brain that affects phonemic analysis. So the same brain network is used for different languages, but it is possible that the malfunction affects only one language. These findings clearly challenge the traditional view which sees that any physiological or biological limitations blocking native language learning will similarly block FL learning (see for example Spolsky 1989: 19).

Nonetheless, the implication of these studies is that students, whose native language is Finnish and who do not manifest any symptoms of dyslexia in their native language, may still have a deficit affecting their English or other foreign language learning. On the other hand, students who have been diagnosed as dyslexic in their native language may have no problems in learning foreign languages. As it was suggested by Miller-Guron and Lundberg (2000: 43), some dyslexic students may even do better in English than in their native language. Therefore, it is important not to make hasty conclusions about students' language skills. When problems are detected, the teacher should also remember that despite the biological deficits or differences, it is still possible for dyslexic students to learn a foreign language. What are needed are alternative methods of learning and teaching.

2.2.1.3 Brain Hemisphere Dominance

Research has also been conducted on the effects of brain hemisphere dominance on language learning. It has been found that the two hemispheres are specialised in working in different ways. The left hemisphere concentrates on restricting, lining, organising and categorising our environment, and it focuses on real things, details, logical wholes, and linguistic accuracy (Hintikka and Strandén 1998: 97). The right hemisphere, on the other hand, deals with emotions, intuition, imagination, creativity and artistry (Hintikka and Strandén 1998: 97). Although in the ideal case the hemispheres would co-operate in balance, one of them is generally dominant (Hintikka and Strandén 1998: 96). Particularly in stressful situations and when they

are learning something new, people tend to rely on their dominant hemisphere (Hannaford 2003a: 15).

Hannaford has studied the neural basis of learning and educational kinesiology, and she points out that the so-called normal students tend to process information predominantly in their left hemisphere whereas students with learning disabilities often process information predominantly in their right hemisphere (Hannaford 2003a: 134). Students with learning disabilities also have less activity in the left hemisphere even when the task requires linguistic processing, and they switch to the other hemisphere less frequently when the task requires different kind of processing (Hannaford 2003a: 135).

In addition to the different areas of specialisation, another issue is important concerning the hemispheres: they control the opposite sides of the body. In other words, functions on the right side of the body are processed and controlled in the left hemisphere and functions on the left side of the body are processed and controlled in the right hemisphere (Hannaford 2003a: 17). Therefore people whose dominant eye is on the opposite side to their dominant hemisphere are able to process visual information in all situations, also when they are feeling stressed. On the other hand, people whose dominant eye is on the same side as their dominant hemisphere have difficulties in processing visual information when feeling stressed. Because of stress, they are forced to use their dominant hemisphere although they would need to use the opposite hemisphere in order to process the information they are receiving.

Hannaford (2003a) proposes a method in which an individual's dominant eye, ear, hand, and foot, and their relationship to the dominant brain hemisphere are determined. So, there are 32 possible dominance profiles based on these different dominance patterns. Hannaford (2003a: 18) sees that a person whose dominant eye, ear, hand, and foot are all on the opposite side to his/her dominant hemisphere is able to process information at full capacity. On the other hand, a person whose dominant eye, ear, hand, and foot are all on the same side as his/her dominant hemisphere processes information below capacity. Between these extremes, there are people who are processing some information at full capacity and some below their capacity. Thus, Hannaford (2003a: 14) proposes that an individual's learning style depends on the nerve connections between his/her sensory organs and the dominance profiles can be used to provide information for students and teachers in finding the best possible ways of learning for each individual.

2.2.2 Experiential Factors

Experiential factors, which include prior language training, can, among other things, influence the levels of language attitudes, motivation and/or language anxiety experienced by students (Gardner and MacIntyre 1993: 8). Students entering upper secondary school have generally studied English as long as seven years (if they have chosen English as their first foreign language) and thus their prior experience in learning English is quite extensive. For those who have learning disabilities, these experiences are likely to include some kinds of difficulties.

Prior language learning experiences, also called language learning histories, reflect individual students' experiences in their own particular situations and contexts. As Oxford and Green (1996: 20) point out, they can be used to increase the students' self-awareness and the teacher's understanding of each learner. Oxford and Green (1996: 23) see that acknowledging students' language learning histories is the first step in working with students' individual learning styles and strategies. Tackling the issue in class can also have a bonding effect on the group as students learn more about each other and about the teacher (if s/he shares his/her own experiences) (Oxford and Green 1996: 23).

Both biological and experiential antecedent factors seem to play an integral role in the case of students with FL learning disabilities. Although they are at the same age and have got the same amount (and often also the same quality) of language training as their fellow students, they often have different biological and experiential starting points for their FL learning as they enter upper secondary school.

2.3 Individual Difference Variables

The socio-educational model (Gardner and MacIntyre 1993) proposes six individual difference variables which are divided into cognitive and affective variables. Cognitive variables include intelligence, language aptitude, and language learning strategies. Affective variables include language attitudes, motivation, and language anxiety. In the model (Gardner and MacIntyre 1993), these variables are shown as

being relatively independent of each other, but it is recognised that they may correlate significantly. Gardner and MacIntyre (1993: 9) suggest that language attitudes have a causal influence on motivation because it is seen that motivation needs an affective basis to be maintained and attitudes could be argued to serve this function. Also, Gardner and MacIntyre (1993: 9) see that there is a causal link between motivation and language anxiety. These two variables are usually negatively correlated so that high levels of motivation reduce anxiety but also that high levels of anxiety decrease motivation. Furthermore, Gardner and MacIntyre (1993: 9) point out that language anxiety and motivation have an effect on learning strategies.

In my view, the integration of both cognitive and affective factors is the strength of the socio-educational model. As pointed out by Pintrich et al. (1994: 360), the integration of motivational and cognitive components provides a much more detailed model of student learning because current views suggest that they both are important components of successful academic performance.

2.3.1 Cognitive Variables

Individual differences in cognitive resources and abilities are fundamental to understanding FL learning processes and the causes of variation (Robinson 2001: 379). Cognitive variables facilitate learning by making for the smooth transmission of learned material (Gardner and MacIntyre 1992: 212). The socio-educational model of second-language learning (Gardner and MacIntyre 1993) acknowledges three cognitive variables: intelligence, language aptitude, and language learning strategies.

2.3.1.1 Intelligence

Traditionally intelligence has been seen as the ability to carry out abstract thinking, which in turn refers to the ability to grasp relationships and patterns, especially those that are not readily detected by the senses (Gardner et al. 1996: 2). However, many psychologists see that intelligence goes beyond the ability for abstract thinking and incorporates abilities that enable people not only to use tools skilfully but also to carry out a wide range of other tasks (Gardner et al. 1996: 2).

Howard Gardner proposed his theory of multiple intelligences in 1983 as a challenge to the “classical view of intelligence”. According to him, the classical view

sees intelligence as a unitary capacity for logical reasoning exemplified by mathematicians, scientists, and logicians. Gardner, however, sees that there are several relatively autonomous intelligences. In his original presentation of the theory, he proposed that there are seven such intelligences. The key point is that there is not just one underlying mental capacity but a variety of intelligences, working in combination. (Gardner et al. 1996: 203.)

The seven intelligences, according to Gardner, are linguistic, musical, logical-mathematical, spatial, bodily-kinaesthetic, intrapersonal, and inter-personal intelligence (Gardner et al. 1996: 205). Gardner argues that all normal people are capable of using all the intelligences, but individuals are distinguished by their particular “profile of intelligences” (Gardner et al. 1996: 211). In other words, all individuals have their own, unique combination of relatively stronger and weaker intelligences which they use to solve problems. Gardner sees that these relative strengths and weaknesses partially explain individual differences (Gardner et al. 1996: 211).

Although the concept of intelligence is in itself controversial, intelligence, as it is measured by intelligence tests, is often used as a reference to which an individual’s achievement is compared when learning disabilities are diagnosed. However, this requirement for discrepancy between achievement and intelligence has received criticism (see for example Siegel 1989 or Gustafson and Samuelsson 1999), and it has been pointed out that standard IQ tests measure precisely the skills and abilities that are often deficient in individuals who have learning disabilities (Siegel 1989: 471).

Considering the multiple and disputed role of intelligence in FL learning, it is probably best understood as consisting of students’ different strengths and weaknesses in learning as Gardner (1983) proposes in his theory of multiple intelligences. As well as a challenge, the multiple intelligence patterns of students could also be seen as a source of ideas to approach FL learning from different perspectives. Christison (1996: 12) notes that students can learn a lot about themselves and from each other when they are acquainted with the different intelligences and when multiple intelligences are considered in lesson planning. As Christison (1996: 11) points out, students can use the information about their intelligences in making their learning more efficient.

2.3.1.2 Language Aptitude

Language aptitude is a general term which refers to those verbal abilities that facilitate foreign language learning (Gardner et al. 1997: 345). Carroll (1962: 122) views aptitude as a “relatively invariant characteristic of the individual, not subject to easy modification by learning”. Many researchers agree that language aptitude is one of the central individual differences in language learning and that it is the most successful predictor of language learning success (see for example Skehan 1989 or Ganschow et al. 1998). In the 1950s and 1960s, there was considerable interest in the study of aptitude for learning a foreign language. During this period, Carroll and Sapon (1959) developed the Modern Language Aptitude Test (MLAT) and Pimsleur (1966) the Language Aptitude Battery (LAB), which still remain the most highly recognised tests for measuring FL aptitude (Sparks and Ganschow 1996: 172).

Carroll (1962) saw that language aptitude includes four aspects: phonetic coding, grammatical sensitivity, rote memory and inductive language learning ability. By phonetic coding, Carroll (1962: 128) referred to the ability to “code” auditory phonetic material in such a way that this material can be recognised, identified, and remembered over time. People who are low in this ability have trouble in remembering phonetic materials (words and forms) and mimicking speech sounds (Carroll 1962: 129). By grammatical sensitivity, Carroll (1962: 129) referred to the ability to handle grammar, in other words, the forms of language and their arrangements in natural utterances. According to Carroll (1962: 129), an individual who has this ability is sensitive to the functions of words in a variety of contexts. A third variable in language aptitude, rote memory, refers to the capacity to learn a large amount of foreign language material in a relatively short time (Carroll 1962: 129). Inductive language learning ability, on the other hand, refers to the ability to infer linguistic forms, rules and patterns from new linguistic content (Carroll 1962: 130). Pimsleur, who was influenced by Carroll, saw that language aptitude includes three factors: verbal intelligence, auditory ability, and motivation (Gardner and MacIntyre 1992: 215).

More recently, Skehan (1989: 36) has suggested that there are two different profiles of language aptitude: some learners possess an analytic aptitude, and others are more memory-oriented. People with analytic aptitude achieve success through organising and structuring material whereas people who are memory-oriented rely

more on memory without much analysis (Skehan 1989: 36). According to Skehan (1989: 35), the same language learning success can be achieved by either of these two orientations if learners just play to their strengths.

Studies on language aptitude have indicated that correlations between measures of language aptitude and foreign language achievement are generally positive and significant (Gardner et al. 1997: 345). Successful FL learners exhibit significantly stronger FL aptitude than unsuccessful learners (Sparks 2001: 40). Gardner and MacIntyre (1992: 215) state that in the long run, language aptitude is probably the single best predictor of achievement in a foreign language.

2.3.1.3 Language Learning Strategies

Language learning strategies can be defined as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford 1990: 8). Learning strategies are considered to be cognitive variables because they represent a cognitive plan to promote language learning (Gardner and MacIntyre 1992: 216). However, they seem to have an affective origin, in other words, affective attributes are quite likely responsible for the use of learning strategies (Gardner and MacIntyre 1992: 219).

According to Oxford (1990), learning strategies can be either direct or indirect. Direct learning strategies are strategies that directly involve the target language and they require mental processing of the language (Oxford 1990: 37). Oxford (1990: 37) divides direct strategies into memory, cognitive, and compensation strategies. Memory strategies help students to store and retrieve new information. Cognitive strategies enable learners to understand and produce new language by many different means (e.g. reasoning, analysis, note taking). Compensation strategies allow learners to use the language in spite of their often large gaps in knowledge.

Indirect learning strategies, on the other hand, support the process of language learning without directly involving the target language (Oxford 1990: 135). Oxford (1990: 135) divides them into metacognitive, affective and social strategies. Metacognitive strategies allow learners to coordinate the learning process by using functions such as centring, arranging, planning, and evaluating. Affective strategies help the learner to regulate emotions, motivations, and attitudes whereas social strategies help students to learn through interaction with others.

It has been suggested that successful language learners have a wider repertoire of language learning strategies and that they use the strategies more often than less successful learners (see for example Griffiths 2003: 380 or Harris and Grenfell 2004: 120). Successful language learners also seem to have an ability to use metacognitive strategies (Harris and Grenfell 2004: 121), which refer to the strategies of planning, monitoring, and evaluating language use. Learners who have effective metacognitive strategies can select strategies that are appropriate to the task and they can also monitor whether the strategy is effective or not and modify their strategy selection if necessary (Harris and Grenfell 2004: 121).

Ahonen (2005: 71) points out that students with learning disabilities often have ineffective learning strategies and they tend to assume a passive role in learning relying on teachers or parents to regulate their studying. However, it is still unclear whether strategy use is the cause or the product of the level at which students are working. Yang (1999) found that students' self-efficacy beliefs about learning English were strongly related to their use of learning strategies. However, as Yang (1999: 531) points out, it is not clear whether it is learners' beliefs that lead to their use of learning strategies or whether it is learners' use of learning strategies that shapes their beliefs about themselves as language learners. All in all, it seems possible, as Griffiths (2003: 381) points out, that effective strategies help students to develop higher levels of language proficiency, which in turn might lead to the use of higher level strategies and so on with one continuously increasing the other.

According to Oxford (2003: 274), a strategy is useful if it relates well to the FL task at hand, the student employs the strategy effectively and links it with other relevant strategies for doing the task, and the strategy coordinates with the student's general learning style preferences. Learning styles are general approaches preferred by students when learning a language or dealing with a difficult problem (Cohen 2003: 279). For example, each individual reflects sensory style dimensions (visual/auditory/kinaesthetic) and social style dimensions (extroverted/introverted) (Oxford 2003: 273). Because of individual learning style preferences, no single strategy is appropriate for all learners (Cohen 2003: 282).

A disputed issue is whether learning strategy training should be direct or embedded. In direct instruction, students are informed of the value and purpose of strategy training, whereas in embedded instruction, students are given activities and materials structured to make them use the strategies being taught but the reasons for

the use of the specific strategies being practised are not discussed (O'Malley and Chamot 1990: 153).

For example, Donato and McCormick (1994: 456) argue that language learning strategies cannot be directly taught and implemented by learners with uniform success. They (ibid.: 453) see that learning strategies develop as a by-product of socialisation into a community of language learning practice. Donato and McCormick (1994: 454) state that since classroom practices often do not reflect authentic and purposeful language use, students may lack opportunities for functional language practice and therefore they are not motivated to carry out functional learning strategies even if they are made aware of them. Therefore, Donato and McCormick (1994: 456) see that the emergence of strategies is a by-product of goal-directed situated activity in which mediation through artefacts or discourse plays a central role. They (ibid.: 462) propose that learning strategies can be developed and sharpened by the systematic documenting and thinking about performance.

According to O'Malley and Chamot (1990: 184), strategy training should be both direct and embedded. In other words, they propose that students should be informed about the goals of strategy instruction and made aware of the strategies they are being taught. This is because it seems that cognitive knowledge will facilitate transfer of the strategies to new tasks and assist students towards independent use of the strategies (O'Malley and Chamot 1990: 184). There are a lot of studies which have shown that learners benefit from instruction that facilitates appropriate use of strategies. For example, Chamot (2001: 39) reports that teachers who had integrated strategy instruction in their lessons stated that the instruction had helped especially their weaker students to make greater achievements. Also most students found that the strategy instruction had had a positive effect on their language learning, and some students indicated that they also used the strategies outside class. Thompson and Rubin (1996) studied the effects of strategy instruction in listening comprehension and found that even though improvement was a slow process, strategy instruction did help the students.

2.3.2 Affective Variables

Affective variables can be defined as “those emotionally relevant characteristics of the individual that influence how she/he will respond to any situation” (Gardner and

MacIntyre 1993: 1). Three types of affective variables are included in the socio-educational model of second-language learning: language attitudes, motivation, and language anxiety.

2.3.2.1 Language Attitudes

The concept of language attitudes is far from simple, but Gardner and MacIntyre (1993: 9) define them as “any attitudinal variables that might be implicated in the language-learning context”. There are basically two types of language attitudes: attitudes towards learning the foreign language, and attitudes towards the foreign-language community (Gardner 1985: 39). Attitudes towards learning a foreign language have been shown to relate to other factors, for example age and gender. Gardner (1985: 43–44) reports that studies have indicated that girls tend to demonstrate more positive attitudes than boys towards learning foreign languages, and that attitudes become less positive with age. There is also an association between attitudes towards learning a foreign language and achievement in that language (Gardner 1985: 45). On the other hand, it has been indicated that attitudes towards learning a foreign language are independent of intelligence and language aptitude (Gardner 1985: 45). Research on attitudes towards the foreign-language community has produced variable results. What has been found is that attitudes towards the foreign-language community tend to be independent of intelligence and language aptitude (Gardner 1985: 47).

In the socio-educational model, attitudes are seen as consisting of integrativeness and attitudes towards the learning situation, which arise from the learner’s sociocultural milieu (MacIntyre and Charos 1996: 4). Integrativeness refers to the desire to learn a foreign language in order to meet and communicate with members of the target language community (MacIntyre and Charos 1996: 4). It also includes the general interest in foreign languages and an integrative orientation towards learning the language in question (Gardner et al. 1997: 345). Attitudes towards the learning situation refer to the evaluation of the language teacher and the course (MacIntyre and Charos 1996: 4), but also the class and the textbooks (Gardner and MacIntyre 1993: 2).

MacIntyre and Charos (1996: 4) suggest that both integrativeness and attitudes towards the learning situation contribute to the learner’s level of motivation.

Together these three factors (integrativeness, attitudes towards the learning situation, and motivation), which have been called the integrative motive, influence the activity level of the learner in both formal and informal learning situations (MacIntyre and Charos 1996: 4). In other words, as Gardner and MacIntyre (1993: 9) put it, attitudes act as an affective basis for motivation. Since the socio-educational model proposes that attitudes have a causal influence on motivation and motivation acts as a mediator between attitudes and language achievement, they are closely linked with the topic of the following section, motivation.

2.3.2.2 Motivation

Motivation as an individual difference variable in learning has attracted a lot of interest in both psychology and pedagogy. Gardner (1985: 10) defines motivation as the combination of effort and desire to achieve the goal of learning the language and the satisfaction experienced in this activity. Since motivation has been studied quite extensively over the years, a lot of different terms and frameworks have been used to explain its various aspects. The problem in these numerous studies is that different terms are used for the same phenomena and the terms ‘attitudes’ and ‘motivation’ are often used in an inconsistent manner. In this study, motivational aspects are first discussed as characteristics of an individual learner and then as characteristics that are specific to learning situations.

There are a lot of aspects determining the motivational level of individual students. When students enter the FL class, they carry with them the prior experiences they have had in FL lessons. These prior experiences naturally affect the expectations they have of their performance in class. It has been proposed that the higher the expectancy that a behaviour can produce a specific outcome, the greater tends to be the motivation to perform the activity (Tremblay and Gardner 1995: 507). Therefore students need to believe that they can be successful in order to be motivated. Self-efficacy refers to individuals’ beliefs that they have the capability to reach a certain level of performance or achievement (Tremblay and Gardner 1995: 507). Research has suggested that students with higher levels of self-efficacy will persist longer, be more likely to use cognitive strategies, and perform better than other students (Pintrich et al. 1994: 361). Students with learning disabilities, on the

other hand, often have inaccurate estimates of self-efficacy (Klassen 2002: 88, Margolis and McCabe 2004: 241).

In addition to positive expectations and self-efficacy, it is also important to consider how students view their successes and failures in the classroom. Causal attributions, or attributional beliefs as Pintrich et al. (1994: 361) call them, are used for understanding why events have occurred, and thus future behaviour is in part determined by the perceived causes of past events (Tremblay and Gardner 1995: 508). There is evidence suggesting that individuals who attribute a failure to lack of ability become less motivated than individuals who attribute the failure to lack of effort (Dweck and Leggett 1988: 258). It has also been found that students with learning disabilities tend to attribute their failure to lack of ability (Pintrich et al. 1994: 361, Valås 2001: 103), which can, in turn, result in learned helplessness that is detrimental to future expectancies and behaviour (Fincham and Cain 1986: 325). Learned helplessness can be defined as “a resigned, pessimistic, helpless state that develops when the person wants to succeed but feels that success is impossible or beyond him or her for some reason” (Dörnyei 1994: 276–277). Witt and Brdarski (2003: 79) suggest that this learned helplessness may contribute to a student’s feeling of inferiority and lower levels of self-efficacy in social situations. Failures in school and other important areas of life may lead to the individuals’ feeling as if others feel something is wrong with them and this feeling may result in low self-esteem (McNulty 2003: 376, Rack 1997: 68).

Goal setting has also been found to be an integral aspect of learners’ motivation. Goal setting theory suggests that individuals who have accepted specific and difficult goals will outperform individuals with non-specific or easy goals or with no goals at all (Bandura 1989: 28). In addition, goals need to be attainable and not too distant in order for them to provide effective incentives and guides for present action (Bandura 1989: 45). If language learners do not believe that their performance leads somewhere or is ultimately valuable, their motivation will be lowered (Oxford and Shearin 1994: 19).

Another aspect of motivation is valence, which refers to the subjective value that an individual associates with a particular outcome (Oxford and Shearin 1994: 18). Oxford and Shearin (1994: 19) indicate that if students do not perceive value in their performance, their motivation will be lowered. Thus, as Tremblay and Gardner (1995: 508) point out, an awareness of the consequences that would follow from the

mastery of a foreign language is a necessary condition for perceiving value in studying the language. The model proposed by Deci and Ryan (1985) and widely used in educational psychology distinguishes between intrinsic and extrinsic motivation. Intrinsic motivation comes from within the individual and so for students, who are intrinsically motivated learning is a goal in itself. Extrinsic motivation, on the other hand, comes from outside the individual and so students, who are extrinsically motivated learn for the sake of rewards. Gardner et al. (1996: 258) point out that extrinsic motivation is not enough on its own. Students who think that they work only to gain extrinsic rewards are likely to stop working once such rewards are withdrawn whereas students who find work to be intrinsically rewarding and enjoy doing it are likely to continue to work even if they do not get any extrinsic reinforcement (Gardner et al. 1996: 258). An internally motivated person's behaviour does not require an immediate, external demand, control, or reward contingency (Deci et al. 1992: 458). It has been argued in many studies that intrinsic motivation variables are central to learning disabilities (see for example Deci and Chandler 1986, Ellis 1986, Deci et al. 1992).

The aspects of motivation discussed above have to do with learners' personal characteristics. There are also characteristics in the learning situation that can influence student motivation. Dörnyei (1994: 277) separates three sets of motivational components specific to learning situations: course-specific, teacher-specific, and group-specific motivational components. Dörnyei (1994: 277) proposes that course-specific motivational components concern the syllabus, the teaching materials, the teaching method, and the learning tasks. Students evaluate how well these aspects of the course meet their personal needs in terms of interest, relevance, expectancy, and satisfaction (Dörnyei 1994: 277).

Teacher-specific motivational components concern the teacher's personality, teaching style, feedback, and relationship with the students (Dörnyei 1994: 277). Dörnyei (1994: 278) suggests that the most important teacher-related motive is affiliative drive, which refers to students' need to do well in school in order to please the teacher. Another teacher-related motivational component is the teacher's authority type (Dörnyei 1994: 278). Students' motivation is enhanced if the teacher supports student autonomy, shares responsibility with them, offers them options, and involves them in decision making. A third teacher-specific motivational aspect is the teacher's role in direct and systematic socialisation of student motivation (Dörnyei

1994: 278). Dörnyei (1994: 278) suggests that there are three channels for this socialisation process: modelling, task presentation, and feedback.

Group-specific motivational components concern the dynamics of the learning group and include four aspects: goal-orientedness, norm and reward system, group cohesion, and classroom goal structures (Dörnyei 1994: 278). Goal-orientedness refers to the extent to which a group is attuned to pursuing its goal. It should be noted, as Dörnyei (1994: 278) points out, that some groups may have developed a goal of not learning but hanging out and having fun, or they may have no goal at all. The second aspect, the norm and reward system of a group also has a major impact on student motivation. Dörnyei (1994: 278) suggests that rewards and punishments should fit in with group norms agreed by most group members. For example, if preparing for tests is not a norm in the group, punishing students with poor grades is futile in order to get them study more. The third aspect of group-specific motivation, group cohesion, refers to the strength of relationships between the group members (Dörnyei 1994: 279). Dörnyei (1994: 279) suggests that in a cohesive group members want to contribute to the success of the group and the goal-oriented norms have a strong influence on the individual. Finally, Dörnyei (1994: 279) proposes that classroom goal structures, which can be competitive, cooperative, or individualistic, have an influence on motivation. It has been suggested that the cooperative goal structure, in which students work in small groups and each member shares responsibility for the outcome and is equally rewarded, is more efficient in promoting motivation, involvement, and positive attitudes towards the subject area, peers and teacher than the other types of goal structures (Dörnyei 1994: 279, Dörnyei and Malderez 1997: 74). It has also been found that cooperative learning promotes an academically and personally supportive classroom climate as well as maximises positive interdependence and achievement among learners (Ghaith 2002: 269).

Then, what about individuals who are not motivated to learn a foreign language? The terms 'demotivation' and 'amotivation' are used to describe situations in which a person has for some reason lost his/her motivation. Demotivation concerns various negative influences that suppress existing motivation, and it is related to specific external causes (Dörnyei 2001: 143). For example, a student can become demotivated after s/he has experienced a humiliating situation in the class. Thus demotivated learners are people who were once motivated but have lost their commitment and interest for some reason. Dörnyei (2001: 143) reminds that

demotivation does not mean that all the positive influences that originally formed the motivational basis of behaviour have been cancelled.

Amotivation, on the other hand, refers to a lack of motivation caused by general outcome expectations that are unrealistic for some reason (Dörnyei 2001: 143). For example, a student can be described as amotivated when s/he thinks that there is no point in studying the language or that s/he is not capable of learning it. According to Deci and Ryan (1985 as quoted by Dörnyei 2001: 144), amotivation is not caused by a lack of initial interest but rather by the individual's experiencing feelings of incompetence and helplessness when faced with the activity. Thus, demotivation can lead to general amotivation (Dörnyei 2001: 143–144), which seems to relate to the concept of learned helplessness discussed earlier.

The socio-educational model proposes that there is a reciprocal causation between achievement and attitudes and motivation (Gardner and MacIntyre 1993: 2). In other words, attitudes and motivation influence language achievement, and language achievement as well as experiences in formal and informal language contexts influence attitudes and motivation. However, some researchers argue that it is achievement that causes motivation and not the other way around. For example, Sparks and Ganschow (1995) and Ganschow et al. (1998) argue that problems with FL learning are not likely to be primarily the result of lack of motivation or poor attitude, but suggest that they are more likely to arise from difficulties in dealing with language. However, in their study on poor FL learners, Sparks and Ganschow (1993) did find students who did not seem to have any language-based problems behind their FL learning difficulties. This is contrary to the assumption made in the LCDH that a student with no linguistic coding deficits will have little difficulty learning a foreign language in the classroom. Sparks and Ganschow (1993) do not, however, present any explanation for this so it remains unclear what they see as the cause for the problems of these students.

It is commonly agreed that motivation is one of the main determinants of achievement in FL learning. Although there are differing views on whether lack of motivation can be the cause of FL learning disabilities, it can probably be concluded that it is something that the FL teacher needs to consider when dealing with students who are having difficulties in their studies.

2.3.2.3 Language Anxiety

Anxiety refers to the feelings of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system (Horwitz et al. 1986: 125). It has been proposed that there is language anxiety which is specific to language learning and which is different from other forms of anxiety (Gardner and MacIntyre 1993: 5). Gardner and MacIntyre (1993: 5) define language anxiety as “the apprehension experienced when a situation requires the use of a second language with which the individual is not fully proficient”. Anxious feelings can be experienced when speaking, listening, reading, or writing in the foreign language. Anxious students may have difficulty concentrating, become forgetful, miss classes and postpone homework (Horwitz et al. 1986: 126).

Horwitz et al. (1986: 128) suggest that language anxiety should be seen as “a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning arising from the uniqueness of the language learning process”. It has been found that as students get older, they report higher levels of anxiety (Onwuegbuzie et al. 1999: 229). Horwitz (2000: 258) points out that people are usually not able to appear equally intelligent, sensitive and witty when they are speaking a foreign language as when they are speaking their native language. She proposes that this disparity between how we see ourselves and how we think others see us is the explanation for language anxiety. Her view comes close to that of Pimsleur’s (1980: 3–4) who has described the feelings of anxiety in the following way:

One of the main reasons why people despair of studying a language is that it “makes them feel stupid.” To the world, one is a competent adult, but to a language teacher one may sound like a babbling baby, forced to stammer out even the simplest ideas. ... In contrast with daily life, where we can usually avoid situations that embarrass us, in the classroom we are helpless in front of a teacher who can, by an ill-timed question, expose our ignorance. A ludicrous accent or a blatant mistake in grammar might identify us as incompetent.

As Pimsleur’s description points out, there are aspects that are very specific to FL classes and that make them places that can cause students to feel anxious.

Research has shown that anxiety about foreign language communication has a significant effect on FL learning (MacIntyre and Charos 1996: 6). MacIntyre et al. (1997: 276) found that anxious students tend to underestimate their FL abilities. In

addition, anxious students tend to communicate less information and not to express themselves as well as more relaxed students (MacIntyre et al. 1997: 278). Since anxious students are more reluctant to use the foreign language, they cannot re-assess their competence in the course of learning. According to MacIntyre et al. (1997: 278), this leads to a cycle, in which the anxiety level remains high because the student does not accept evidence of increasing proficiency that might reduce anxiety.

Horwitz et al. (1986: 127) suggest that foreign language anxiety comprises three components: communication apprehension, test anxiety, and fear of negative evaluation. Communication apprehension refers to the anxiety experienced in interpersonal settings (Horwitz et al. 1986: 127). Horwitz et al. (1986: 127) point out that people who typically have trouble speaking in groups are likely to experience even more difficulties when required to speak in a foreign language. Test anxiety naturally occurs in testing situations, and Horwitz et al. (1986: 127) suggest that it stems from a fear of failure. Students who are test-anxious often put unrealistic demands on themselves and feel that anything less than a perfect performance is a failure (Horwitz et al. 1986: 127–128). Fear of negative evaluation may occur in any social, evaluative situation (Horwitz et al. 1986: 128). It is apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively (Horwitz et al. 1986: 128).

Onwuegbuzie et al. (1999: 228) found three aspects of self-perception to be predictors of FL anxiety. These factors were students' expectation of their overall achievement in FL courses, perceived self-worth, and perceived scholastic competence. According to Onwuegbuzie et al. (1999: 228), it is likely that FL aptitude and/or previous achievement account for the learner's expectations. However, Onwuegbuzie et al. (1999: 228) see that it is equally likely that because of anxiety, the learner forms erroneous or excessively negative expectations, which in turn, reduce motivation, effort, and consequently achievement.

Tsovili's (2004) study on dyslexic students and reading anxiety suggests that the level of anxiety is dependent on the perception that the students have of their disabilities. Adolescents with dyslexia reported higher levels of reading anxiety compared to adolescents without dyslexia, and the dyslexic students who reported high anxiety felt helpless and believed that they had no control over the outcome of their actions (Tsovili 2004: 79–81). According to Tsovili (2004: 82), they did not show willingness of learning and they refused to accept and face the problem. On the

other hand, as Tsovoli (2004: 82) points out, the dyslexics who experienced low anxiety appeared to be reconciled with their difficulties and the level of their abilities. Although Tsovoli's (2004) study concentrated on reading anxiety, it could be assumed that similar results would be found in other types of language learning situations.

Tobias (1985, 1986) has studied the effects of anxiety on cognitive processing. Tobias (1985: 135) sees that the intrusive thoughts associated with anxiety can impair the ability of an individual to process information at three stages: input, processing, and output. Input refers to the presentation of instructional material to students, processing represents the operations performed by students to encode, organise, and store input, and output involves the performance of students to produce of previously learned material. According to Tobias (1985: 137), students high in anxiety divide their attention between task demands and personal concerns. Tobias (1985: 138) further suggests that the self-related cognition consumes cognitive resources that would otherwise be directed to the task at hand. Therefore students with high anxiety and low skills are in a situation where both the task and anxiety make maximum demands on cognitive capacity, possibly exceeding available capacity for dealing with the task (Tobias 1985: 139, Tobias 1986: 50). Tobias's (1985) theory has been supported by MacIntyre and Gardner's (1994) study.

Contrary to these above-mentioned views, Sparks and Ganschow (1995: 239) suggest that language coding is a separate module and therefore immune to the effects of anxiety. Sparks and Ganschow (1995: 235) propose that language anxiety is a consequence of poor achievement in FL learning which in turn is the result of a cognitive disability. MacIntyre (1995b: 246) criticises this view and claims that although anxiety would not affect the actual coding of language, it may still affect what the learner is able to do with the encoded linguistic stimuli. MacIntyre (1995b: 246) points out that the arousal of anxiety during the processing of linguistic stimuli is found to hinder the learner's performance significantly. MacIntyre (1995a: 92) and Horwitz (2000: 256) acknowledge the fact that some people are anxious about learning because of cognitive disabilities but remark that some people are anxious about language learning independent of processing deficits.

Although there is disagreement on the mechanisms through which language anxiety operates, I agree with MacIntyre (1995a: 95) who proposes that anxiety, cognition and performance are best understood as a cycle in which cognitions

influence performance, performance influences anxiety, anxiety influences cognitions, and also the other way around. If FL teachers aim to support the students with FL learning disabilities in the best possible way, they surely need to take into account both the affective and cognitive side of FL learning.

It has been suggested in the socio-educational model that motivation and language anxiety are negatively correlated. In other words, it is assumed that not only do high levels of motivation reduce language anxiety but also that high levels of anxiety decrease motivation (Gardner and MacIntyre 1993: 9). This idea has been supported by MacIntyre et al. (1997) and Onwuegbuzie et al. (1999: 228). However, further research is required to determine the specific nature of this relationship.

2.4 Language Learning Contexts

2.4.1 Formal Language Learning Contexts

On the next level, Gardner and MacIntyre (1993: 9) direct their attention to formal and informal language learning contexts. Formal language learning contexts refer to situations which involve direct instruction in the language, as in the formal classroom situation (Gardner and MacIntyre 1993: 9). All of the individual variables, except language attitudes, which operate through motivation, are shown to have a direct effect on learning in the formal language learning context (Gardner and MacIntyre 1993: 9). This indicates, according to Gardner and MacIntyre (1993: 9), that individual differences in these variables influence how successful individuals are in FL learning.

In formal instruction, the teacher attempts to influence the course of learning by controlling the learners' exposure to the language, making them aware of significant features and patterns in the language, providing opportunities for practising the language, and ensuring that learners receive feedback on their performance (Littlewood 1984: 60). Krashen (1982: 59) points out that although the FL classroom cannot substitute for the language use in real life situations, it can bring students to the point where they can begin to use the outside world for further learning and understand the language. The FL classroom supplies input so that

students progress in language learning and understand “real” language to at least some extent (Krashen 1982: 59).

2.4.2 Informal Language Learning Contexts

Informal language learning contexts refer to situations where an individual can learn some knowledge or practise in the language voluntarily (Gardner and MacIntyre 1993: 9). Informal contexts could, for example, include watching television, listening to the radio, going to the movies, talking with others, and reading (Gardner 1985: 148). In other words, in an informal context, the intent is not instruction in the foreign language but rather exposure to it for some other purpose, which can be, for example, entertainment or communication (Gardner 1985: 148). Because of the voluntary nature of the informal context, Gardner and MacIntyre (1993: 9) see that only individuals who are motivated take part in it. Thus, motivation is shown to have a direct role in the informal context. However, once an individual enters the informal context, the other individual difference variables begin to influence the learning.

Then what is the role of informal learning contexts in the FL learning process? As it was pointed out earlier in this chapter, there are some differences between second and foreign language learning environments. Second language learners get considerably more input in the language outside the classroom than foreign language learners. However, a considerable input of spoken English is available through the television and popular music media in Finland. Since English-speaking programmes are subtitled and not dubbed, as they are in many other countries, children are exposed to spoken English from very early on. Miller-Guron and Lundberg (2000: 43) suggest that this partly explains why dyslexic students often have a good command of oral English. As Miller-Guron and Lundberg (2000: 44) point out, also British and American pop lyrics, holidays abroad, English-speaking pen pals, computer games, hobbies with English instructions, or exchange students could all give motivation to use English in informal contexts. So, although it is acknowledged that there is a difference between second and foreign language learning, it should also be emphasised that Finnish students are not restricted to using English solely in the formal context (in the classroom), but they have a lot of opportunities to use English in informal contexts. It should be emphasised that informal contexts are not

only able to provide more FL input in quantity but also FL input that is more varied in quality.

2.5 Linguistic and Non-Linguistic Learning Outcomes

Both formal and informal language learning contexts are proposed to have direct effects on both linguistic and non-linguistic learning outcomes (Gardner and MacIntyre 1993: 9). Linguistic outcomes refer to changes in an individual's competence, knowledge, and skill in some aspect of the language (vocabulary, grammar, reading, writing, speaking, pronunciation, or listening comprehension) (Gardner and MacIntyre 1992: 213). Non-linguistic outcomes, on the other hand, refer to various affective characteristics such as attitudes towards the other language group, attitudes towards FL learning, intentions to use the language in the future, and anxiety about learning or using the language (Gardner et al. 2004: 4). So, non-linguistic outcomes refer to attitudes and values that develop from the FL learning experience (Gardner 1985: 149).

Gardner and MacIntyre (1992: 213) point out that successful, positive experiences will quite likely result in improved levels of both linguistic and non-linguistic outcomes. Unsuccessful, negative experiences, on the other hand, will result in a lack of linguistic development and quite likely also unfavourable non-linguistic outcomes. The socio-educational model also proposes that there is a causal link from the linguistic outcomes to the non-linguistic outcomes, which means that individuals' reactions to the learning experience depend to some extent on their relative degree of success (Gardner and MacIntyre 1993: 9). In other words, experience in a course, experiences with the language, and/or level of language proficiency attained can have an effect on some affective variables (Gardner et al. 2004: 4).

It should be noted that there may be multiple intraindividual patterns of motivation and cognition that can lead to the same overall achievement outcome. Pintrich et al. (1994: 368) found that students with learning disabilities can be doing poorly because they lack metacognitive knowledge about learning strategies or because they are low in their intrinsic motivation for learning. Pintrich et al. (1994: 368) see that this finding has implications for instructional interventions. Different

patterns of motivation and cognition may merit different instructional interventions, depending on the students' individual profiles (Pintrich et al. 1994: 368). Whereas students who have low cognitive skills may benefit more from cognitive strategy instruction, students who have low motivation may benefit from some attributional retraining and instruction in refocusing their motivational orientation to a learning goal orientation and increase their interest in learning (Pintrich et al. 1994: 368–369).

Since language learning is an on-going process, Gardner and MacIntyre (1993: 9) propose that both linguistic and non-linguistic outcomes have an effect on the individual difference variables. On the one hand, linguistic outcomes influence the use of language learning strategies. On the other hand, non-linguistic outcomes are expected to have direct effects on language attitudes, motivation and language anxiety.

2.6 Summary

Having discussed all the factors in FL learning represented in the socio-educational model, it can be concluded that seeing language learning as a social activity seems to offer numerous explanations for the individual differences in FL learning. Language learning is more than just acquiring elements of the foreign language. Upper secondary school students enter the FL classroom with a variety of experiences which can potentially influence their FL learning. Their learning will be affected by the environment in which they live, the history that they have of learning the foreign language, and their inborn physiological characteristics. They have developed a perception of themselves as language learners and they have a view about the foreign language and its usefulness for them. Because of their prior experiences, they have different attitudes towards the language and its speakers, they can be motivated or demotivated to learn, and they feel differing levels of anxiety when learning. They can also be seen as having different levels of intelligence and language aptitude, and they use different types of learning strategies. These factors affect (to varying degrees) how well the students learn the language both in and outside the classroom. Because of these factors, the students also have different expectations of what the outcome of their FL learning will be. In addition to the language, the students learn

about themselves as language learners and as members of the group. These learning outcomes, in turn, serve as the basis for future learning.

The socio-educational model of second-language learning is a dynamic framework which is in action all the time. The different variables represent a student's situation at one point in time but if changes occur in one part of the model, it has effects on the other parts. For example, if a student learns new language learning strategies in the formal language learning context, it is likely that there is a change in the language learning outcomes. As the learning outcomes are more positive, the student probably also views the experience of language learning more positively. His/Her attitudes and motivation may become more positive and anxiety level may decrease. As learning is seen more positively, the student may feel encouraged to use the language also in informal contexts, which in turn increases both linguistic and non-linguistic learning outcomes, and so on.

However, the same goes with negative factors. For example, if a student's anxiety level in the FL class increases for some reason, it is probable that his/her language learning outcomes are poorer than before. S/he does not learn the language as efficiently as before and the experience of language learning becomes more negative. As a result, his/her use of language learning strategies may suffer, his/her attitudes and motivation towards language learning probably decrease, and s/he is less likely to use the language in informal language learning contexts.

What the social and dynamic nature of language learning suggested in the socio-educational model means to FL teachers is that teachers are able to intervene in the language learning process since they determine what the learning is like in the classroom. In an ideal case, they may produce a positive domino effect in which a struggling student's whole language learning experience is gradually changed into a more positive one. However, since the language learning process is sensitive to changes, what is needed is patience and continuous commitment to practices that maintain a learning environment where students feel motivated and capable of learning.

The socio-educational model also includes factors that are not likely to change. Intelligence and language aptitude are generally considered to be rather permanent characteristics of an individual and so changes in the other variables of the model are not likely to have an effect on them. Also dyslexia is a characteristic that is not going to go away regardless of changes in the other variables. However, these

characteristics do not necessarily have a negative effect on language learning. Intelligence and language aptitude are related characteristics in the sense that language aptitude could be seen as part of the linguistic intelligence in the theory of multiple intelligences. Therefore, a person who is low in linguistic intelligence (and thus in language aptitude) is likely to be high in some other intelligences. In FL class, this person might be able to compensate his/her linguistic weaknesses by using the other aspects of his/her intelligence in which s/he is strong. Thus, s/he would be able to learn the language regardless of the challenges his/her linguistic intelligence and language aptitude set for him/her. Likewise, dyslexic individuals are able to learn a foreign language if they are aware of their strengths and can use them to compensate for their weaknesses.

From the point of view of this study, the socio-educational model can be seen to explain FL learning in quite a comprehensive way. Although it does not specifically address FL learning disabilities, the model acknowledges the individual differences which are crucial when dealing with FL learning disabilities. Therefore, I have to agree with Gardner and MacIntyre (1992: 213), who point out that the model can help FL teachers to understand that the experiences students get in the classroom can influence not only students' levels of achievement but also their feelings and motivation about language learning at that moment and in the future.

3 FROM THEORY TO PRACTICE

In the previous chapter, the socio-educational model of second-language learning was used as a framework to explain the complex nature of foreign language learning and the disabilities that some students have in it. It was pointed out that there is a lot of research on the different individual difference variables, and they all have been found to have an effect on FL learning. However, it was also suggested that these factors do not operate independently of one another as Gardner and MacIntyre's (1993) socio-educational model shows. On the contrary, they are often connected with each other and individuals who have FL learning disabilities are likely to have problems in more than one of these areas. So, although it is possible to differentiate between cognitive and affective factors influencing FL learning on the theoretical level, the situation is quite different in practice. It is usually very difficult to determine which difficulties appeared first and what is their causal link to one another.

As the debate over the underlying causes of FL learning disabilities shows, there are still many questions to be answered. The matter is made more complicated by the fact that students have very personal profiles as language learners and FL learning disabilities cannot be described in a way that would apply to every single person. This is also something that the FL teacher needs to consider when s/he is dealing with students who have difficulties in their language studies. The teacher needs to have an open mind because the cause of the problems is not usually easy to determine. For example, a student who seems to be simply demotivated may turn out to have a language deficit behind his/her problems, and a dyslexic student may turn out to have negative attitudes and poor motivation, which partly explain his/her problems in FL learning. Therefore, it is important that the teacher considers all the possible factors in language learning that might contribute to the difficulties.

Since learning disabilities can be manifested in many ways, it is not always easy to identify them. Usually, the teacher notices the students having the most visible problems. According to the iceberg theory (McColl et al. 1996: 3C: 3), students who are experiencing the greatest difficulties in learning can be thought as the visible tip of an iceberg. The “copers” form the rest of the iceberg, which is below the surface. They may have the same needs as the students at the tip but they

experience them less urgently, or they can struggle through on their own. Thus, as McColl et al. (1996: 3C: 3) point out, the more visible difficulties experienced by some students should signal to the teacher that there are probably other students experiencing problems of a lesser degree. By adapting to the needs of the special needs students, the teacher can improve learning conditions for all (McColl et al. 1996: 3C: 3).

Whereas there are a lot of attempts to explain the causes and define the symptoms of FL learning disabilities, there is far less research on how these findings can be utilised in the FL classroom in the best possible way. Most literature on the practical applications is based on findings about dyslexic students having difficulties in learning their native language or it concerns young FL learners in special education classes. Although the research on FL learning disabilities from the pedagogical point of view seems to be gaining more interest, further studies are still needed.

In the following chapter, literature on the instructional practices that have been found useful when teaching students with FL learning disabilities is reviewed. Although Gardner and MacIntyre's (1993) socio-educational model of second-language learning was found a very useful way of discussing the factors affecting language learning and difficulties in it, a different framework is used when practical solutions to the problems in FL learning are discussed. In other words, the structure of the following chapter does not follow the structure of the socio-educational model but is structured to meet the needs of FL instruction in practical classroom situations.

4 PRACTICAL IMPLICATIONS FOR TEACHING ENGLISH AS A FOREIGN LANGUAGE

Compared to studying in comprehensive school, studying in upper secondary school is often found speedy and demanding (Kosonen 1992: 43). There are a lot of reasons for this: studying in the form of courses, extensive themes, and the awareness of the approaching matriculation examination strain students (*Luki-työryhmän muistio* 1999: 29). Also students' study skills and habits might be reasons why they experience studying strenuous but also teaching methods may cause overstraining (Kosonen 1992: 66). Students also feel that teaching in upper secondary school is too teacher-directed, hasty, and based on routines (Härkönen 2001: 17). If a student has a learning disability, the strain that studying in upper secondary school brings about is likely to be even greater.

The law for upper secondary schools (*Lukiolaki* 1998) does not mention special education or learning disabilities: it only refers to some special arrangements in case of illness or injury. Although the matriculation examination board gave instructions on taking dyslexia into consideration in the matriculation examination in 1976, learning disabilities have not been accounted for in school practices at the more general level (Härkönen 2001: 18). According to Härkönen (2001: 18–19), the problem has already been acknowledged in many upper secondary schools, but in practice, there is not enough information or resources to act systematically to help students with learning disabilities. On the other hand, as Härkönen (2001: 19) points out, some teachers still think that if studying in upper secondary school causes difficulties for a student, s/he should consider some other school.

However, the new curriculum for upper secondary schools (*Lukion opetussuunnitelman perusteet* 2003), which will be brought into use in the autumn of 2005, acknowledges learning disabilities. It states that all the people who work in the school are responsible for student welfare. According to the curriculum, student welfare involves taking care of students' physical, mental, and social well-being and it can be promoted by identifying and tackling learning disabilities and other problems. The curriculum also obliges schools to determine in their own curricula the support and guidance that is offered to students who have physical, mental and social difficulties. (*Lukion opetussuunnitelman perusteet* 2003: 19.) According to the

curriculum (*Lukion opetussuunnitelman perusteet* 2003: 221), diagnosed injuries or comparable disabilities such as reading and writing disorders should also be taken into account in assessment so that students have the possibility to special arrangements and demonstrating their skills also by other means than writing.

The curriculum (*Lukion opetussuunnitelman perusteet* 2003: 20) also states that if a student's language disability appears in upper secondary school, support measures and implementation should be started immediately. However, the identification of students with learning disabilities is often problematic in upper secondary school. Teachers generally have so many students that they do not have time to identify students' special features (*Luki-työryhmän muistio* 1999: 28). Also students may be quite good at keeping their problems to themselves. Therefore students should be encouraged to inform their teacher about their problems, and the teacher probably needs to do some testing on his/her students in order to identify the students having difficulties.

When a teacher has a strong suspicion that a student has dyslexia, the student needs to be directed to a psychologist, speech therapist, special education teacher, neurologist, or phoniatrist to be further tested. These specialists are able to determine whether the students can be diagnosed as having dyslexia and write them the certificates they need in order to have special arrangements in the matriculation examination (*Ylioppilastutkintolautakunnan yleiset määräykset ja ohjeet*). However, it is important to note that such a thing as foreign language learning disability does not exist in the eyes of these authorities. The only disability they can diagnose is dyslexia and therefore there will always be students who are having difficulties in their FL studies but who will not be diagnosed dyslexic. These students might have dyslexic tendencies or their dyslexia might not show in the tests that are in Finnish because they are dyslexic only in a foreign language. The FL teacher, however, should provide support for all the students who are having difficulties regardless of whether they have been diagnosed as having dyslexia or not. It is said in the curriculum (*Lukion opetussuunnitelman perusteet* 2003: 19) that special support should be offered to those students who have temporarily fallen behind in their studies or whose studying is impaired because of an injury, illness, or functional deficiency.

Some schools arrange special courses for dyslexic students where the aim is to improve students' study skills and provide methods with which they are better able to

cope with the demands of studying in upper secondary school. Pääkkönen (2001) studied the usefulness of a course of this type. The students who attended the course felt that the best issues on the course were the information about different learning styles, information about dyslexia, practice in foreign languages, and discussions with the teacher (Pääkkönen 2001: 27). Many students felt that the discussions about learning and learning disabilities helped them in many ways: their mood got better, they found a new way of thinking, their anxiety level declined, they got experiences of success, they could concentrate better, and they got a more extensive view on learning (Pääkkönen 2001: 29). Therefore, it could be concluded that it is a very good idea to arrange special courses for students with learning disabilities. On a course where there are only students who have clear difficulties in their studies, the teacher is really able to focus on their problems and offer more individual support. Students also get the feeling that they are not alone with their difficulties and are able to share their problems with other students having similar problems. Although the present study aims to give suggestions applicable to mainstream FL courses, many of the themes that the students in Pääkkönen's (2001) study found helpful can also be addressed in regular courses. Addressing different aspects of learning is likely to be useful for all students regardless of their ability.

In this chapter, suggestions for modifications in mainstream FL education are discussed under three major headings. First, general considerations on how the FL teacher is able to make the classroom a better place for different kinds of learners are discussed. Second, the focus is directed to the different areas of language study and teaching (listening, speaking and pronunciation, reading, writing, vocabulary, and grammar), and suggestions are made on how to support students with learning disabilities in each area. Third, issues considering examinations and evaluation are discussed. Suggestions are made on how to help students with learning disabilities to cope with testing and what the teacher needs to consider in evaluation.

4.1 Creating the Basis for Motivated Learning

In this section, attention is paid to the classroom environment and the promotion of independent and motivated learning. Although the goal of foreign language classes is to provide students opportunities to learn the language, it is not their sole purpose. In

addition to guiding students in studying the subject they teach and helping them to develop their studying skills, the teacher should also provide instruction that strengthens students' self-esteem and helps them to recognise their personal special features (*Lukion opetussuunnitelman perusteet* 2003: 24). Thus, the goal of a FL teacher is not just to try to improve students' language skills but also support adolescents' growth as individuals by providing them opportunities to improve their social skills, self-knowledge, and self-esteem. These are very challenging tasks for the teacher.

Recognising the special features and needs of each student is often almost impossible in upper secondary school because there are usually over 30 students in a group. Also in big schools, where there is more than one English teacher, students may attend courses taught by many different teachers (*Luki-työryhmän muistio* 1999: 28–29). Thus it may be very difficult for the teacher to get to know each student. This makes it even more important that students are encouraged to take responsibility of their own learning and become aware of their personal strengths and weaknesses. As it is pointed out in *Luki-työryhmän muistio* (1999: 28), upper secondary school students are at an age when they get interested in themselves as learners. Therefore it is probably easier than before to discuss differences between individuals in learning and also learning disabilities. Students can be given the responsibility of their learning and it is their task to find methods in which they learn in the best possible way. The teacher's task is to help the students in recognising their personal learning styles and suggest alternative ways of studying.

I begin this section by focussing on how a positive classroom environment can be promoted and continue by discussing how classroom learning can be made more motivating, and students more independent learners.

4.1.1 Learning Environment

4.1.1.1 Promoting a Positive Learning Environment

The teacher has a big responsibility in creating an atmosphere in which students feel that it is safe to use the foreign language, make mistakes and express their opinions. A teacher hoping to increase interest and enjoyment of FL study needs to find ways of promoting positive class atmosphere and feelings of success in students (Disick

1972: 418–420). It is important to make the FL classroom a welcoming, positive place where language anxiety is kept to a minimum (Oxford and Shearin 1994: 24). This is particularly important from the point of view of the students with FL learning disabilities. It is also important that the teacher is able to create friendly and unreserved terms with the students so that they feel comfortable in asking his/her help and advice.

The work of building a positive learning environment starts when the teacher meets a new group. There is always an element of tension present when a group of people who do not know each other meet. Therefore it is important that students are given an opportunity to learn about each other as much as possible (Dörnyei and Malderez 1997: 69). As Dörnyei and Malderez (1997: 69) point out, acceptance cannot occur without knowing the other person well enough. Lack of tolerance often stems from insufficient information about the other party. In the first couple of lessons, it could be a good idea to use ice-breakers in order to get the students feel more at home. The purpose of ice-breakers is to set students at ease, to get them memorise each other's names, and to learn more about each other (Dörnyei and Malderez 1997: 70).

It is also important to establish group norms. Group norms are rules or standards that describe behaviour that is essential for the efficient functioning of the group (Dörnyei and Malderez 1997: 69). It has been suggested that the group norms should be formulated explicitly, and discussed and accepted by the students (Dörnyei and Malderez 1997: 78). Dörnyei and Malderez (1997: 70) also point out that the teacher should make sure that the norms are observed since students quickly start to ignore them if they notice that the teacher does not pay attention to them.

Also group cohesion is important in making the learning experience more positive. Clément et al. (1994) found that group cohesion contributes significantly to the learners' motivation to learn the foreign language. Dörnyei and Malderez (1997: 73) suggest that cohesion can be promoted by a number of factors. For example, sharing group history, fostering positive relations between the students, and creating group legends are means to achieve cohesion. Also using cooperative rather than competitive or individualistic learning tasks is likely to increase group cohesion (Dörnyei and Malderez 1997: 74).

Since the traditional authoritarian teacher role does not allow for the students to share responsibility, it has been suggested that an efficient group leader's task is not

so much to lead the group but rather to facilitate it, that is, to create the right conditions for development (Dörnyei and Malderez 1997: 76). Dörnyei and Malderez (1997: 76) suggest that there are three main characteristics of an efficient facilitator: empathic ability, acceptance of the students, and congruence. Empathy involves the ability to get on the same wavelength as the students and to be sensitive to the group atmosphere. Acceptance means that the teacher has unconditional positive regard towards the students and sees them as individuals with their strengths and weaknesses. Congruence, in turn, refers to the teacher's ability to be him/herself and be open about his/her own limitations.

Creating a positive atmosphere probably requires most of all acceptance of difference. Both the teacher and the students should accept the fact that the students are different: they learn differently, they have different goals, and they are not equally enthusiastic about learning English. Accepting difference also includes accepting students with learning disabilities and making sure that the disabilities are identified and students are helped to cope with their problems (Disick 1972: 420).

It is also important to remember that the teacher acts as a model in the classroom. His/Her attitudes towards the language and the students are integral in creating positive class atmosphere. If the teacher is enthusiastic about his/her subject, looks happy to be in the classroom, and enjoys the company of the students, many of the behaviours s/he models will carry over to the students (Disick 1972: 420). Dörnyei (1994: 282) points out that the teacher should show that s/he values FL learning as a meaningful experience that produces satisfaction and enriches life. S/he should also share his/her personal interest in the foreign language and FL learning with the students and take the students' learning process and achievement seriously (Dörnyei 1994: 282). Students should feel that they have an important part to play and that they can make useful contributions in the class (Dörnyei 2001: 130).

4.1.1.2 Reducing Anxiety

Since anxiety can significantly impede students' ability to perform in the FL class, it is important to consider practices which could possibly reduce its negative effect. It is important that teachers always consider the possibility that anxiety is the cause for a student's problems before attributing poor performance solely on lack of ability or poor motivation (Horwitz et al. 1986: 131). It should also be noted that it is not only

students having difficulties in learning a foreign language who experience anxiety but also students with good FL skills can feel anxious in class. Horwitz et al. (1986: 131) see that FL teachers have two options when dealing with anxious students: teachers can help them to learn to cope with the existing anxiety-provoking situation, or they can make the learning context less stressful.

So, how can students be taught to cope with stressful situations? According to Horwitz et al. (1986: 131), one way to do this is using relaxation exercises. Relaxation exercises can range from breathing exercises to self-motivating mantras. Also some brain gym exercises can be used for this purpose. For example, making hook-ups has been found to have a relaxing and calming effect (Hannaford 2003b: 103). Hook-ups can be done in standing, sitting, or lying down. First ankles are crossed and arms are stretched straight ahead so that the backs of the hands are against each other and the thumbs point downwards. Then, one hand is lifted across the other so that the palms are against each other, and the hands are clasped. Finally the joint hands are turned downwards and toward the body until the arms are on the chest and the elbows point downwards. After keeping this position for a couple of minutes, the person usually feels more relaxed and calm (Hannaford 2003b: 103). A useful relaxation exercise is also the energy yawn (Hannaford 2003b: 108). It is done by kneading the muscles around the jaw joints. When a person is stressed, s/he often tightens his/her jaw. The energy yawn relaxes the whole face and makes it easier to put thoughts into words (Hannaford 2003b: 109).

Anxious students can also be helped to cope with stress by teaching language learning strategies (Horwitz et al. 1986: 131). Strategy instruction can also influence self-efficacy positively (Schunk 1989: 17), which in turn may result in a lowered level of anxiety. MacIntyre et al. (1997: 280) point out that FL teachers should be aware of the fact that anxious students may underestimate their abilities. Some anxious learners believe that they cannot learn the foreign language and thus create negative expectations which in turn lead to decreased effort and achievement. Gardner (1985: 53) notes that by encouraging students to assess their performance in a more positive light, teachers could raise learners' level of motivation and effort, which could then lead to better language learning outcomes. As Gardner and MacIntyre (1993: 7) suggest, it could be expected that language anxiety declines as the student gains proficiency.

Then what about the learning context: how can it be made less stressful? First of all, students should be given complete and accurate information about the course goals and objectives. In order for students to have realistic expectations, it would be useful to discuss reasonable time commitments for successful language learning and the value of some language ability even though it is less than fluent (Horwitz 1988: 286). Horwitz (1988: 292) suggests that teachers should include discussions about the nature of language learning as part of their instruction. The teacher should also openly discuss foreign language anxiety (Onwuegbuzie et al. 1999: 232–233) as well as FL learning disabilities with students (Paatela 2002b: 21). Students having problems in FL learning are likely to feel much more comfortable when they notice that the teacher is aware of the existence of the kinds of problems they have (Paatela 2002b: 21).

Naturally the teacher can also build students' confidence and self-esteem by simply encouraging, reassuring, giving positive reinforcement, and empathy (Onwuegbuzie et al. 1999: 232). The teacher should also pay attention to the error correction techniques that s/he uses (Horwitz et al. 1986: 131, Onwuegbuzie et al. 1999: 232). Disick (1972: 418) sees that one way of promoting feelings of success is the use of small-group activities. According to Disick (1972: 418), the opportunity to work with one or more friends increases student involvement in activities and creates a more favourable attitude towards FL learning than requiring students to participate in activities in front of the entire class. When they work in small groups, students experience much less embarrassment and self-consciousness than when they are faced with the whole class.

4.1.2 Independent and Motivated Learning

Teachers play a significant role in socialising and shaping the motivation of their students. For many students with FL learning disabilities, it is necessary that they are explicitly shown how to learn the foreign language. They need to be made aware of their personal strengths and weaknesses in order for them to be able to find ways in which they can learn the foreign language. They also need to be shown how to assess their work and how to set goals for themselves.

Although it is possible that there are students who cannot be motivated to learn the language, most students' motivation can probably be increased. As Dörnyei

(2001: 119) points out, there are a great number of motivational strategies and it is unlikely that none of them would work. In my mind, it is important to investigate the causes for the lack of motivation. Blaming a student's lack of motivation is sometimes the easy way out and the underlying problems remain unsolved. The teacher should always consider the possibility that the student is having difficulties with the language and is therefore demotivated.

In the following sections, suggestions are made on how to promote students' independent and motivated learning. Many different kinds of questionnaires are proposed in order to make both students and teachers more aware of the students' prior language learning experiences, their present goals, and their learning styles. However, it should be noted that not all these questionnaires are intended to be used at once or even on the same course. Naturally, there is also more need for these questionnaires at the beginning of the studies when the teacher and students are getting to know each other. It should also be noted that although administering these questionnaires will probably take some time from other areas to be covered on the course, they provide students with real opportunities to use the foreign language.

4.1.2.1 Language Learning Histories

Discussion about students' language learning histories can be used as a means for students to get to know each other and for the teacher to get some information about the students. It is particularly useful to discuss past experiences when the teacher meets a new group and wants to start building group cohesion. Students' language learning histories can also be used as an introduction to different learning styles and strategies. Oxford and Green (1996: 20–21) suggest that students' prior language learning experiences could be discussed by giving students some questions concerning their learning histories and asking them to discuss these questions in groups. The groups can also be asked to summarise their experiences and share them with the class. Oxford and Green (1996: 21–23) propose that the teacher could also share his/her own language learning experiences with the group, including also the negative or embarrassing moments, so that the students notice that negative experiences are not judged but dealt with in a sympathetic way.

At this point, it may also be useful to address the issue of learning disabilities. The teacher can give a short lecture on what learning disabilities are and how they

are manifested in FL learning. In upper secondary school, the responsibility of informing the teachers about their learning disabilities is on the students (*Lukityöryhmän muistio* 1999: 30), and so the teacher should also encourage students to contact him/her if they have diagnosed learning disabilities or if they suspect that they have.

After the discussion in class, students can be asked to write about their language learning histories in detail. This can be done by giving students a list of questions that they need to write answers to, asking them to write short essays on the subject, or if they want to be creative, writing a poem or compiling a poster (Oxford and Green 1996: 23). This written assignment can naturally be given as homework. A task sheet including instructions for students and questions that could be used as a basis for the group discussion and the written assignment is presented as Appendix 1. The task sheet is based loosely on the ideas presented in Oxford and Green (1996), but the questions are mine.

Asking students to discuss and write about their prior language learning experiences seems to be a good way for the teacher to become acquainted with the students. When they can write about their prior experiences, students are also given an opportunity to express their wishes and worries concerning the course and inform the teacher about their possible learning disabilities or problems they have experienced in the past. Thus, the teacher is able to identify the students who have had problems in the past and is also in a better position to give support to these students early on. It is also an opportunity for the students to become more aware of themselves as language learners and the variety of experiences and learning styles the other students have. It is important to promote acceptance of difference also among the students themselves. Naturally discussing and writing about past language learning experiences also provides an opportunity to authentic and meaningful language use.

4.1.2.2 Goal Setting

Goal setting is important both for the group as a whole and for individual students. In order to be able to function as a group, common goals accepted by the whole class need to be set (Dörnyei 1994: 282). The major objectives for each course are determined in the curriculum, but the teacher can naturally decide how these

objectives are considered in the instruction and by what means the goals are to be met. It is useful to make these objectives visible to students at the beginning of each course so that they are aware of what the course entails and what they are expected to know after the course. It could also be useful to give students the course plan in which the lessons are listed and the theme of each lesson is stated. Although it is likely that some changes have to be made to the course plan as time goes on, students are still able to follow the progress of the course in the plan and see the big picture.

In addition to the common, more general goals set by the curriculum and the teacher, students need to have more personal goals. Setting proximate, attainable, and specific goals is important for the students to be and stay motivated (Bandura 1989: 28), and therefore it could be useful to ask students to set themselves their own personal goals at the beginning of each course. At the same time, they could also look back and evaluate their prior learning and how they have met the goals they set for themselves at the beginning of the previous course. Both the evaluation of their old goals and setting new ones could be done by asking students to fill in a questionnaire. Since questionnaires applicable to this purpose were not found, I compiled two slightly different questionnaires, one of which can be used on the first course (Appendix 2) and the other on the following courses (Appendix 3). It would be helpful if students had the questionnaire they filled on the previous course when filling in the new one, so that they were reminded of the goals they had set for themselves.

In addition to asking students' personal goals, the teacher could in the same questionnaire gather students' views on the course practices. Students can be asked what they liked or disliked in the previous course and what additions or improvements they would like to see made. In this way, students would feel that they have an important role in developing future courses. As Disick (1972: 419) points out, these types of questionnaires can also be a fruitful means of teacher-student communication.

It is important that the students' personal goals are also acknowledged by the teacher. As Oxford and Shearin (1994: 16) point out, optimal teaching requires that the teacher understands why the students are studying the language and how proficient they want to become. According to Oxford and Shearin (1994: 16), few teachers are aware of their students' true motivations for FL learning, and teachers tend to make assumptions or broad statements about the motivations without directly

asking their students. However, students' motivations for studying a foreign language are individualistic and multifaceted, and they also change over time (Oxford and Shearin 1994: 24). Some students want to develop high levels of proficiency in speaking, others want to develop basic reading skills, and yet others just want to pass the course and focus on other subjects (Oxford and Shearin 1994: 24). Students can also have different goals and motivations for FL learning when they begin their studies in upper secondary school than when the matriculation examination starts to get closer. It is also important that the teacher accepts diversity in the way students establish and meet their goals based on differences in their learning styles (Oxford and Shearin 1994: 24). Therefore by assigning simple questionnaires or essays, the teacher can get valuable information on student motivation and make use of this information when planning lessons (Oxford and Shearin 1994: 16).

Although students have their own personal goals in studying the foreign language, it is important that also the teacher brings up reasons for studying and points out that s/he values FL learning. Students need to know that the teacher takes their learning process and achievement seriously (Dörnyei 1994: 282). Students can be demonstrated that FL learning can be an exciting mental challenge, a career enhancer, and a vehicle to cultural awareness (Oxford and Shearin 1994: 24). Thus, it is important to link the practice in class to real-life situations where the foreign language is needed.

4.1.2.3 Individual Learning Styles

Learners understand and process information differently whether as a result of heredity, educational background, situational requirements, age, or other factors (DeCapua and Wintergerst 2005: 2). The ways in which an individual characteristically acquires, retains, and retrieves information are collectively termed the individual's learning style (Felder and Henriques 1995: 21). Although learning styles are usually seen as rather permanent characteristics of individuals, DeCapua and Wintergerst (2005: 2) suggest that as personalities change, learning style preferences may also change after exposure to different learning situations.

According to Ehrman and Oxford (1990: 311), over 20 learning style dimensions have been identified in the research literature. For example, learners have

been found to have differing sensory modality preferences (visual, auditory, and tactile/kinaesthetic learners), they often have preference for either group-work or individual work, and some are more analytical and others more relational learners. There are also studies on field dependence-independence, reflection-impulsivity, and a number of other dimensions.

Probably the most acknowledged division in learning styles is between visual, auditory, and tactile/kinaesthetic learners. The tactile and kinaesthetic learning styles are sometimes discussed independently of each other (tactile referring to learners preferring a hands-on style and kinaesthetic referring to learners preferring a whole-body style) and sometimes they are seen as forming one style. In this study, these styles are considered as one and the term 'kinaesthetic' is used to refer to both the kinaesthetic and tactile learning style.

It has been found that most people (even as many as 85 per cent) prefer learning through the kinaesthetic channel (Moilanen 2002: 27–28). However, studies have suggested a negative correlation between kinaesthetic learning style and foreign language achievement (see for example Arjanko and Koukkula 1998 or Bailey et al. 2000). Preference for kinaesthetic learning seems to be particularly frequent among people with learning disabilities (Moilanen 2002: 27–28). The problem is that the school environment does not always offer many opportunities to use the kinaesthetic learning channel, at least when students get older (Moilanen 2001a: 19) and thus teachers should pay particular attention to their teaching style and whether it accommodates kinaesthetic learners. Kinaesthetic learners use their body to process information and therefore they learn by moving around, trying out, doing, and talking (Moilanen 2002: 27). They like role-plays, taking notes, building things, touching and working with different materials (Reid 1996: 43). The teacher can support these learners by using problem-solving activities and by encouraging them to do hands-on work (Peacock 2001: 15).

There are also a lot people who use the visual channel for learning. Visual learners benefit from the use of pictures, colours, symbols, charts, and maps. They need to visualise the things that they are learning in order to remember them. (Moilanen 2002: 28.) In order to accommodate visual learners in class, the teacher can use handouts, videos, encourage note-taking and reading, and write key information on the board or overhead projector (Peacock 2001: 15). Most people, especially people with learning disabilities, learn by using kinaesthetic and/or visual

channels (Moilanen 2002: 28). However, there are also people who prefer using the auditory channel. Auditory learners learn by listening, reading aloud, talking, and restoring memories of situations involving speech (Moilanen 2002: 28). Auditory learners can be helped by using class or group discussions, individual meetings, lectures, tapes, peer tutoring, and giving oral explanations and instructions (Peacock 2001: 15). It should be noted that naturally people usually learn through all these channels to some extent and some people do not have a clear preference for any particular channel.

Learners can also be divided according to their preference for either group work or individual work. Whereas group learners prefer to study and communicate with others to help themselves to learn, understand, and remember information, individual learners prefer to work alone (Reid 1996: 43). The teacher can help group learners by using small group activities and encouraging them to meet other students outside class (Peacock 2001: 15). Individual learners, on the other hand, may be supported by giving them individual attention, using individual meetings, and encouraging independent and self-directed study (Peacock 2001: 15).

Learners have also been divided into analytical and relational learners. Analytical learners are people whose left hemisphere is dominant, and therefore they are often good at tasks that require analytical, linear, sequential, and rational thinking (Kinsella 1996: 25). People whose left hemisphere is dominant often want to work in a quiet, brightly lit environments which are furnished in a matter-of-fact way either by themselves or directed by people whose authority they trust (Hintikka and Strandén 1998: 97). In the classroom, these people need the teacher's help to combine the numerous details to larger entities (Hintikka and Strandén 1998: 97).

Relational learners, on the other hand, are people whose right hemisphere is dominant, and thus they are good at tasks that require relational, holistic, intuitive, concrete, and emotional thinking (Kinsella 1996: 25). People whose right hemisphere is dominant typically prefer a lively, homelike environment which is dimly lit and in which they are surrounded by talk, music, friends with whom they can socialise while studying (Hintikka and Strandén 1998: 97). In the classroom, these people need help in directing their interest from bigger entities also to the details (Hintikka and Strandén 1998: 97).

Students' learning style preferences naturally have an effect on how they like to work in class and how they learn in the best possible way. Therefore being aware

of their learning style is important for students but also for their teacher. As Kinsella (1996: 27) points out, gaining knowledge of students' learning styles is a crucial step particularly in helping doubtful or insecure students. Since students are usually interested in learning about themselves and each other, the issue of different learning styles is likely to be found intriguing.

The issue of learning styles should probably be introduced to students at the beginning of the studies (during the first course) so that they are able to benefit from the information as much as possible. There is probably more than one way of introducing the subject to students but one solution is to address the issue by giving a short lecture on the different learning styles. Then students could be given a simple questionnaire to determine their dominant learning styles. An example questionnaire, which could be used to determine students' sensory preferences and preference for either group or individual work, can be found as Appendix 4. It has been shortened and adapted from Cohen et al.'s Learning Style Survey so that it would be easy enough to understand and complete in class. Appendix 5 contains a sheet which could be used to determine students' brain hemisphere dominance (whether they are analytical or relational learners). Both forms also contain suggestions for students on how to improve their learning based on their learning style. When students have identified their personal learning style preferences, it is useful to have a small-group or whole-class discussion about the results and make the conclusion that there are very different types of learners in the class.

A few things should be considered when administering learning style questionnaires. First of all, the questions need to be straightforward enough so that students are able to understand what is meant. If students are unable to contextualise or apply statements to the current situation or misunderstand the questions due to poor word choice, the validity and reliability of the questionnaire decreases (DeCapua and Wintergerst 2005: 11). Thus, using students' native language could also be necessary to make sure they really comprehend the questions. Second, the subject of learning styles needs to be introduced to students before the questionnaire is administered so that their interest is awakened. Otherwise students may be uninterested or bored in completing the questionnaires and thus they will not reflect upon the questions and indicate their true preferences (DeCapua and Wintergerst 2005: 11). Later, the teacher could also bring out the issue of learning styles in individual meetings with the students (discussed later in this chapter). S/he could ask

students' views on the usefulness of the questionnaire and whether they learned something new about themselves as language learners.

The purpose of raising learning style awareness is to get students to consider their strengths and weaknesses and use this information when they study in class or at home. Nam and Oxford (1998) found in their study on a student with learning disability that when she became aware of her learning style, she was better able to compensate for the learning disability. While some aspects of the student's learning style got in the way of language learning, she could still "balance" or "stretch" her style by acquiring some new learning strategies. However, knowing their learning style preferences is important not only for students who have learning disabilities but for all the students. When they acknowledge their learning style, they are also better able to find the most useful learning strategies.

It has been found that the compatibility of the teacher's instructional style and the student's learning style is a significant factor in the success of the learning process, and a mismatch between the styles may have a negative impact on classroom learning (see for example Carrell and Monroe 1993, Felder and Henriques 1995, Peacock 2001). It has also been suggested that having students learn in ways that are not consistent with their natural approach can be extremely threatening (Kinsella 1996: 27). Thus, it is very important that the teacher uses versatile teaching methods and allows all types of learners to use their strengths in class.

4.1.2.4 Learning Strategy Instruction

The goal of strategy training is to help students to become more aware of the ways in which they learn most effectively, ways in which they can enhance their own comprehension and production of the foreign language, and ways in which they can continue to learn on their own and communicate in the foreign language also outside the language classroom (Cohen and Weaver 1998: 9). In other words, as Cohen and Weaver (1998: 9) put it, strategy instruction aims to assist learners in becoming more responsible for their efforts in learning and using the foreign language.

It has been suggested that strategy instruction results in more effective learning and school achievement (see for example Oxford 1990: 201, Chamot 2001: 25 or Harris and Grenfell 2004: 121). There is a need for learning strategy instruction because many students with learning disabilities appear to lack the cognitive skills or

knowledge of how to use existing skills to meet the demands that school sets for them (Ellis 1986: 66). As Schneider and Crombie (2003: 26) point out, all students can benefit from learning strategies but they are particularly important to students with FL learning disabilities and dyslexia. By teaching learning strategies, the FL teacher may instruct disabled students to process the foreign language in multisensory ways using their strengths to compensate for their weaknesses (Schneider and Crombie 2003: 26).

Learning strategies often have to be explicitly taught, especially in FL learning (McColl 2000: 50). Some students will not know what the teacher means when s/he asks, for example, them to learn a list of words. Some students may have passed English courses in comprehensive school without studying, just relying on language skills learned outside school. Since they have not really studied the language before, they may lack the knowledge of how to actually study foreign languages.

So, what should the teacher consider when preparing to introduce learning strategies to students? Cohen and Weaver (1998: 9) suggest that teachers might start with the established course materials and determine which strategies might be inserted. This seems a reasonable approach but perhaps before this stage, the teacher could go through the course book and see whether the book in itself contains any strategy instruction. Modern course books often introduce some learning strategies to students and so it would seem a good idea to make use of the existing material. So, the teacher could first go through the course book, see what strategies are included, and decide how s/he will utilise the strategy instructions in the book. When s/he has done that, s/he is better able to determine whether some additional strategies could be taught to students and what these additional strategies on that particular course could be. The teacher could then design activities around the strategies, or insert strategies spontaneously into the lessons whenever it seems appropriate as Cohen and Weaver (1998: 9) propose.

One possibility could be to tackle the issue of learning strategies through a group-project in which students themselves were required to find out about different learning strategies. This could be done, for example, by dividing the class into six groups and giving each group its own language area (speaking, listening, reading, writing, vocabulary, and grammar) to be covered. Students' task would be to gather strategies that are used in their specific language area and compile a poster or a leaflet in which they would present their findings. They could gather information by

administering a questionnaire to the class and/or by looking for strategies on the Internet or using material provided by the teacher. The groups would then present their final product to the class and give a short lesson in which some of the strategies would be practised. The posters and leaflets could be placed on view in the classroom so that the students could turn to them whenever they needed to. The teacher could also make references to these strategy resources and remind students about the strategies when a new task was presented. After all the groups have presented their work, it could be useful to ask students to evaluate their work and what they learned either by using group discussions or questionnaires.

Although this type of project would take some time off the regular course work, it would probably be worth it if the students became more aware of the learning strategies they are using and learned to use new ones. So that too many lessons were not used on the project, some of the work could be done outside the lessons. What is good about this type of project work is that it provides students an opportunity for meaningful language use and problem-based learning. Also the less successful students could feel that they can succeed when they are working as part of a group and students are not evaluated as individuals but their success would be dependent on their joint efforts. Students would also probably be introduced to more varied strategies since many types of learners would be choosing the strategies to be presented. The teacher easily just concentrates on teaching learning strategies that s/he finds useful and is thus restricted by his/her own personal learning style preferences. When students are giving strategy instruction to each other, it could be assumed that they are also more likely to consider the strategies as something that could really be used and not just some extra work that their teacher is trying to impose on them. The students who do not use strategies efficiently could also understand their usefulness when they are pointed out that many of their classmates are using them.

Although it may seem that strategy training takes valuable time away from teaching the language content, it should be noted, as Cohen and Weaver (1998: 10) point out, that students often become more efficient and independent language learners because of strategy instruction. Students have been reported to become more efficient in completing classroom language tasks, take more responsibility for self-directing their learning outside the classroom, and gain more confidence in their

abilities to learn and use the foreign language (Cohen and Weaver 1998: 10). Therefore strategy training cannot be seen as time being wasted, quite the opposite.

4.1.2.5 Student Responsibility and Independence

It is important that students take responsibility for their own learning. Providing students with opportunities for self-assessment, analysing their personal learning styles, and teaching them different kinds of learning strategies are part of promoting student independence. Student independence can also be promoted by allowing students real choices, sharing responsibility with the students for organising their learning process, giving them positions of genuine authority, and encouraging student contributions, peer teaching and project work (Dörnyei 2001: 131). The teacher can also point out that competence is a changeable and controllable aspect of development. When the teacher shares the responsibility for planning and learning with the students and helps students to develop and use independent and collaborative learning skills, s/he has also more time to work with individuals and groups (McColl 2000: 44).

It should be noted that sharing responsibility for learning is only possible if the teacher and the students are aware of the goals they are aiming for (McColl 2000: 46). For example, the lesson plans can be made visible for students, and the stages can be ticked off as they are completed (McColl 2000: 46). Thus, students become more aware of the structure of the lesson and know what to expect next.

Students also need to know at the beginning of each task what the learning goals are and how they can be achieved (McColl 2000: 46). Therefore, it is a good idea to start a new task with a clear, simple statement of what the students are expected to do at the end of the task (McColl 2000: 47). Depending on the level of independence the students are used to, the teacher needs to determine how precise instructions she is going to give them. If the students are not used to independent work, it is probably useful to start by asking what they already know that will be useful for the task, and after this, what intermediate steps they think will be required (McColl 2000: 46). The teacher can also provide a task plan where the course of action is stated (McColl 2000: 47). When the students start to take more responsibility for their learning, the teacher can simply offer them a choice of methods and let them find out what works best for them. When students can manage

this stage, the teacher can simply indicate the goal and the materials available, and the students will select what best suits their style of learning (McColl 2000: 49). Allowing students some degree of freedom in choosing the activities in class also promotes positive attitudes towards FL learning (Disick 1972: 419).

Based on my own experience, I can say that students also greatly appreciate if they are heard when decisions, for example, on test dates and deadlines for assignments are set. The teacher needs to acknowledge the fact that the students have to study also other subjects and that they also have life outside school. If there is an important ice hockey match on TV in the evening, it might not be wise to set a test on the following day. It can greatly increase students' motivation and attitudes when they see that their teacher is able to accommodate their needs and take their wishes into consideration.

4.1.2.6 Feedback

The students make best progress when they know how well they are doing and when they receive detailed explanations about where they are going wrong or how their work can be improved (McColl 2000: 52). Since the most valuable form of feedback is that received directly from the teacher (McColl 2000: 52), repeated consultations and discussions between the teacher and individual students during the learning process are essential (Schneider and Crombie 2003: 19). In addition to the everyday interaction between the teacher and the students in class, it would be a good idea to have regular one-to-one discussions with the students. However, finding time for an individual discussion with each student can be rather difficult in upper secondary school where there can be over thirty students in a group. A solution could be that the teacher would have a discussion with each student once a year and more often with those who find it necessary. These meetings could take place during lessons so that the teacher gives the students an assignment to do on their own and asks students to come and meet him/her outside the classroom individually. If there is a school assistant in the school and s/he is available, s/he could be asked to supervise the class meanwhile.

The discussions between the teacher and a student do not have to be long. The main thing is that the teacher can focus on that particular student and his/her learning. During these one-to-one discussions, the teacher could better address issues

that are often difficult to talk about in the presence of all the other students in the class. Ehrman (1996: 38) suggests that the teacher could ask the student to tell about his/her learning experiences at the moment and in the past, and what is working for him/her and what is not. Students could also be asked what they would like to change, how they study, what catches their interest, and what they do for fun and relaxation (Ehrman 1996: 38). Ehrman (1996: 38–40) proposes that the teacher should pay attention to the student's learning strategies and styles, motivation, anxiety and other feelings, skills and assets, nonverbal behaviour, and consider whether there is evidence of learning disability or dyslexia.

Offering this opportunity to a one-to-one meeting with the teacher would probably be very important particularly to those students who have FL learning disabilities. They would have a chance to share their feelings of success and failure with the teacher and be given further suggestions and advice. It could be a very motivating and supportive experience if the teacher showed interest in the learning of each individual. This is important to all the students, not just those who have problems.

Since the time the teacher can spend with each student is limited, some other ways of providing feedback also need to be used (McColl 2000: 52). Students can be given help sheets to which they can refer if they are unsure how to proceed, or task materials can include built-in assessment mechanisms that help the students to see what they have achieved and what still needs to be done (McColl 2000: 52–53). Students can also be asked to check each other's work, or they can be provided check lists and answer keys to which they can refer immediately after they have completed a task (McColl 2000: 53). Students should also be encouraged to ongoing self-assessment (McColl 2000: 53).

Positive feedback has generally been found to increase intrinsic motivation because it enhances perceived competence, although studies have also shown that this enhancement occurs only when the feedback is accompanied by support for autonomy (Deci et al. 1991: 333). Therefore, for example, congratulating students for having done well at a self-initiated activity is likely to promote feelings of competence and intrinsic motivation (Deci et al. 1991: 333–334). Feedback that signals progress in learning can strengthen students' beliefs that they are really learning skills and enhance motivation for further learning (Schunk 1989: 20). However, as Schunk (1989: 20) points out, it is important that the feedback is viewed

as credible by students. Schunk (1989: 16) points out that teachers should consider carefully how much assistance they provide to their students. If students get a lot of assistance, they may improve their skills but their self-efficacy for learning does not rise because they do not believe that they could succeed on their own (Schunk 1989: 16–17). Also praising students for doing what they should have done or what they were told to do is likely to make them feel being controlled, which in turn reduces intrinsic motivation and strengthens non-autonomous forms of extrinsic motivation (Deci et al. 1991: 334).

However, when used in the right situations, the use of praise is an effective way of promoting motivation and positive attitudes (Disick 1972: 420). I find it important to occasionally give praise to the class as a whole because that can really have a positive effect on the atmosphere in the class. Students feel that they are all appreciated, they are treated equally, and the teacher does not just praise the work of good students. Also Schneider and Crombie (2003: 20) point out that when students of all ability levels are given the message that they are valued, they can feel safe and at ease to try their best. The FL teacher should present a role model of valuing each individual for the contribution s/he makes in class and thus reduce negative attitudes in the group (Schneider and Crombie 2003: 20).

4.2 Principles for Foreign Language Instruction

As it has been noted earlier, students with foreign language learning disabilities have problems that are very heterogeneous. For some, the problem may be simply motivational, and for others, the problem is not lack of motivation but lack of basic FL skills. Some students have problems on both areas. In this section, the goal is to make suggestions on how the FL teacher could help students who have difficulties in their language skills to do better.

Studies have shown that direct instruction using a multisensory structured language methodology benefits students with FL learning disabilities (see for example Sparks et al. 1992a, Sparks et al. 1992b, Ganschow and Sparks 1995, Sparks et al. 1998). The multisensory structured language (MSL) approach has traditionally been used to teach students with native language problems but has more

recently been found to be useful also in the FL classroom since it helps students to see and understand how language is structured.

In contrast to indirect, natural approaches, which de-emphasise the teaching of vocabulary, grammar, and pronunciation in favour of communicative competence, the MSL approach teaches language in a direct fashion and skill development is emphasised (Sparks et al. 1992b: 33). In MSL instruction, students are explicitly taught not only the grammar (syntax) and vocabulary (semantics) of the foreign language but also its sound-symbol system (phonology) (Sparks et al. 1992b: 33). Language patterns (syntactic, semantic, phonological, orthographic) are made explicit and explained to students (Schneider and Crombie 2003: 17). The FL material is also structured so that the more complex topic builds on the easier one and explicit explanations and discovery techniques are used so that the students are able to see how the new information fits with the previous (Schneider and Crombie 2003: 17).

The MSL approach also involves the simultaneous use of students' visual, auditory, and kinaesthetic channels (Sparks et al. 1998: 242). When teaching is provided through as many channels as possible, students with different learning style preferences are able to benefit from it. Since most people learn through kinaesthetic and/or visual channels, it is particularly important to make sure that instruction does not rely on auditory channel alone (Moilanen 2002: 28).

It is also important in the MSL approach that only a small amount of material is presented at one time (Ganschow and Sparks 1995: 109). Schneider and Crombie (2003: 17) propose that new information should be presented and learnt at a pace at which students are able to cope with and comprehend it. It is important to allow time for overlearning, which means repeating and reinforcing information several times before moving on to new subjects (Cogan 1998: 62, Schneider and Crombie 2003: 17). However, repetition of the same activity should be avoided because it leads to blind memorisation without achieving thorough processing and understanding of the concept (Schneider and Crombie 2003: 50). As Schneider and Crombie (2003: 50) point out, repetition can be avoided by providing a variety of multisensory structured activities: practice can proceed from more receptive to more productive tasks, and regular paper-pencil tasks can be preceded by practice forms using coloured cards and markers, the blackboard, and picture-to-text matching activities. Another reason for the use of variable tasks is that the teacher can thus allow students with different

preferences to do their very best (Cohen 2003: 290). By supporting the students to learn in ways which allow them to experience success instead of failure, the teacher will also be improving motivation to learn (McColl 2000: 39–40).

Modern course books offer good opportunities for multisensory learning since they often contain CDs or CD-ROMs by which students can practise their language skills interactively and independently. As Schneider and Crombie (2003: 78) point out, technological resources can make a positive difference in FL learning for struggling students for many reasons. They provide independent access to a resource at a time that is convenient for the student. Students can repeat tasks as many times as they need to and thus there is a possibility for overlearning. Also it is possible to integrate as many learning channels as possible, particularly the kinaesthetic so that the students can accommodate for possible weak auditory and/or visual clues.

Although studying in upper secondary school is influenced by the approaching matriculation examination, instruction should not be too much determined by its test types and requirements. One of the cornerstones of instruction aimed at students with learning disabilities is that students should be able to experience feelings of success. The teacher should provide activities and exercises by which students are challenged but at which students can also be successful, so that they can attribute their success to their own effort and hard work (Oxford and Shearin 1994: 22). Self-efficacy is best promoted by providing regular experiences of success and emphasising the things that the students can do rather than the things they cannot do (Oxford and Shearin 1994: 21, Cogan 1998: 62, Dörnyei 2001: 130, Ahonen 2005: 67).

However, both teachers and students in upper secondary school have to live with the fact that some areas of language study may be emphasised more, and that certain types of exercises are used in practising more often because of the matriculation examination, at least at the end of the studies. Therefore, although some of the test types used in the final exam have been found to be very problematic for students with FL learning disabilities, they are discussed in this study. Students need to be taught strategies which they can use in order to be successful also in the test types they find difficult.

Regardless of the demands of the matriculation examination, the FL teacher still has many ways to make the experience of language learning enjoyable and interesting. By making the tasks varied, including novel elements, using authentic materials, and relating the content of the tasks to the learners' interests, the teacher is

able to increase student motivation (Dörnyei 1994: 281, Dörnyei 2001: 129). Bringing the language and culture into the classroom through real-life situations is likely to be motivating for the students. The teacher may tell about his/her own experiences with English and travelling abroad, s/he may ask students to tell about their experiences, invite foreign visitors, show films, and play music. It is also important to develop students' cross-cultural awareness by focussing not just on differences but also on similarities between cultures (Dörnyei 1994: 281). When students are given opportunities to really experience that English is not just something that they study in class but something that is spoken out there, they are likely to be more motivated to study it.

The teacher should also use every opportunity available to spread language learning beyond the walls of the FL classroom (McCull 2000: 57). Students hear English on television programmes, films, and music daily, and many also see English on the Internet, magazines, books, and computer games. Some students may have friends with whom they speak English and some may have taken part in exchange programs. The teacher could also consider the possibility of arranging school trips abroad. By discussing these varied situations and pointing out how students are able to learn English also outside the classroom, the teacher can show students that s/he sees value in engaging in these situations.

In the following sections, suggestions are made on how to support the students with FL learning disabilities in the mainstream FL instruction. Suggestions are made concerning six different aspects of language learning: listening, speaking and pronunciation, reading, writing, vocabulary, and grammar. Suggestions made here are mostly based on findings on dyslexic students since literature has mostly focussed on this specific group. As the problems of students with FL learning disabilities tend to be similar to those of dyslexics, it could be assumed that the same instructional practices work to their benefit as well. The suggestions made do not require extra work from the teacher, and they can be used in normal classroom instruction. In addition, it should be noted that by making certain adjustments, the teacher can facilitate the learning of all the students, not just the ones having difficulties.

4.2.1 Listening

4.2.1.1 Core Problems

What probably makes listening difficult for many language learners is that one does not have the luxury of pause and replay, which is possible in reading (Goh 2000: 71). Listening comprehension involves not only auditory processing but also factors which are affected by memory and the level of automation in processing auditory information (Pihko 2003b: 16). Listeners need to hold as much of the spoken text as possible in their short-term memory, and interpret the content before it is replaced by new input (Goh 2000: 71). As Goh (2000: 71) points out, many learners frequently find themselves in a situation where they hear words being spoken before having even processed the previous ones.

Because of functional problems in the auditory channel, students can have difficulties in processing, sorting and sending auditory information. It may be that a student's hearing is not readily prepared to receive auditory information and it is difficult for him/her to keep up the readiness during the necessary amount of time. Students can react slowly or with delay to auditory information, and as a result they do not have enough time to read and answer the questions in listening comprehension exercises. Because of the weaknesses of the short-term memory, students may not remember details and are not able to answer many answers at a time. Additional problems arise if a student has difficulties in distinguishing essential information and unessential noises from each other. Some students also have difficulties in following speech and writing at the same time. (Moilanen 2002: 45.)

Students may also have interpretational problems in the auditory channel. These problems may include, according to Moilanen (2002: 45–46), difficulties in structuring and interpreting auditory information. In other words, auditory messages overlap each other, and get mixed. Because of the problems in phonological processing, the student has difficulties in distinguishing and interpreting sounds and sound strings and in analysing the phonological structure of a word. S/he may be unsure of sounds and therefore also of words. Additionally, the student may have difficulties in hearing the prosody of language: word boundaries, stress and speech rhythm are not clear to him/her and so it is impossible to understand the foreign speech.

Goh (2000: 67) found that low ability listeners have particular problems with recognising words, and they quickly forget what they think they have understood. Another common problem of low ability listeners has to do with attention. They often do not hear the next part of a text because they spend too much time thinking about something they have just heard (Goh 2000: 68).

4.2.1.2 Suggested Solutions

Because many students with FL learning disabilities have difficulties in auditory processing, they need ample opportunities to hear spoken language. However, in addition to opportunities to hear the foreign language, students also need to learn how to be better listeners. Goh (2000: 71) suggests that learners can be taught to improve their listening comprehension skills directly by providing them with practice in perception of selected sounds, content words, pronunciation of new words and intonation features, such as prominence and tones. Therefore, listening comprehension skills are closely linked to speech production skills and pronunciation.

When practising listening comprehension, it is important to have a space which is as interference-free as possible because students with learning disabilities often have problems in their auditory filters and they are thus easily distracted by extra noise (Moilanen 2000a: 17). Language laboratories are ideal places for practising listening comprehension skills since the headphones provide not only clearer sounds but also earmuffs against background noises (Moilanen 2000a: 17).

A relaxed and focused mind is important in listening comprehension. Therefore the situation should be organised so that there is time for a short breathe and clearing of mind of unnecessary information before the listening starts. Before listening, students could be taught to do some relaxation exercises, or, as Hannaford (2003b: 107) suggests, an exercise called 'the thinking cap' in which the outermost fold of the earlap is straightened several times from top to bottom. According to Hannaford (2003b: 107), this exercise stirs up the hearing and improves memory.

Students can also be advised to try different approached to listening. They can try taking notes while they listen, or they can focus on finding out the general outline of the story or alternatively the details (Mäkinen 2003: 12). The teacher should also

encourage students to use their general knowledge of how the world works to infer outcomes when they do not understand everything on tape (Mäkinen 2003: 12).

In order to improve their auditory memory, students can be taught to “film” what they hear, in other words, create pictures of what is happening. The first time students listen to the tape, they create as complete a film as possible, and at the second listening they can fill in the gaps in the film they missed the first time (Moilanen 2000a: 17). It is a lot easier to remember what happened on tape when they have visualised it than if they have to rely only on their auditory memory. However, for some students, visual stimuli can be distracting. These students could be advised to keep their eyes closed during the listening in order to avoid visual distractions (Moilanen 2002: 55).

Moilanen (2002: 59–60) suggests that the teacher could consider whether it is possible to listen to the same tape several times. After the first listening, the problematic parts are clarified and then the tape is listened again. After the second listening, the right answers are provided and the tape is listened once more. So that the listening does not become boring for those who have already understood it at the first listening, the teacher can provide extra tasks, which may include more detailed questions, word hunting or changing the angle, or students could simply be given some other work to do. If it is possible, the text could also be recorded to each student’s own tape. Then students are able to listen to the tape at their own pace and as many times as they need during the lesson and perhaps also at home.

Listening comprehension should be practised in small chunks at least in the beginning. Since listening requires a lot of concentration, it is good to have a pause after 20 minutes of listening (Moilanen 2002: 58). During the pause, answers to the questions may be checked and students have time to relax for a while before moving on the next part of the listening task.

It is also necessary to pay attention to the listening comprehension material that is used. The teacher could consider whether it is possible to start with some other listening comprehension tasks than the ones used in the matriculation examination because at least the tests for the advanced level often involve rather abstract topics and challenging vocabulary. For example, SUKOL (The Federation of Foreign Language Teachers in Finland) provides listening comprehension material that could be used with the first- and also second-year students. Also, using matriculation examination tests for the basic level and checking that the topics in the test are

concrete enough provides the students with more likelihood of success in the beginning. The teacher could also consider using video material as a listening comprehension exercise because it is a lot easier to understand speech when there are visual cues and the speaker can be seen.

Next, further suggestions are made concerning different types of listening comprehension exercises used in the matriculation examination and thus also when practising listening comprehension in normal lessons. These include multiple choice questions, open-ended questions, partial dictation, and writing a summary. In the end, a few suggestions are made for further practice outside class.

Multiple Choice Questions

Multiple choice questions often cause problems for dyslexic students because students are required to read and understand both the question and up to four alternative answers. Because of their phonological processing difficulties and their weak short-term memory, dyslexic students often find that there is not enough time to read the questions and alternative answers and make their decision about the right answer.

Multiple choice questions also tend to test more the comprehension of the written alternatives than students' actual listening comprehension skills (Kristiansen 1999a: 18). However, since multiple choice questions are widely used in the matriculation examination, the teacher cannot avoid them altogether. Although it is not possible to avoid using multiple choice questions, there are some things the teacher can do to help the students to cope with them better. The teacher can prolong the pauses or add extra pauses so that students do not need to answer more than one question at a time (Moilanen 2000a: 17). Since students are often distracted by unfamiliar and difficult words in the questions and in the alternative answers, it could be a good idea to go them through beforehand and make sure that the listening comprehension task is not made even more difficult by the fact that students do not understand the questions (Moilanen 2000a: 17).

The teacher could also give the students an opportunity to treat multiple choice questions as open-ended questions or let the students answer the questions in their own words orally (Moilanen 2002: 63). When checking the answers, the teacher could first ask how the students who treated the questions as open-ended answered

and then what the right answer was in the multiple choices. This would also help the students in choosing the right answer from the multiple choices (Moilanen 2002: 63).

Open-Ended Questions

Open-ended questions are often easier than multiple choice questions for dyslexic students because students do not have to think about the alternative answers as in multiple choice questions, and they can put their answer in their own words. Questions can be either in English or in Finnish but using Finnish questions is preferable because students are then able to really focus on the content of the text that is being listened to instead of thinking about how to express their answer in the foreign language (Kristiansen 1999a: 18). Kristiansen (1999a: 18) proposes that open-ended questions should be set so that the answers form the core of the story. In this way, the information remains in long-term memory easier.

Students can also be provided the written script of the text that is being listened to. Following the script while listening helps students to understand the sound-letter correspondences and speech rhythm of the foreign language (Moilanen 2002: 56). The script can also help concentration and provide an extra help with problem-solving (McColl 2000: 39). The teacher can also give students the opportunity to choose whether they like to listen with or without the written script (Moilanen 2000a: 17). Thus, students can give up using the script at their own pace when they notice that their listening comprehension skills have improved. Alternatively, the teacher can provide a summary of the text that is going to be heard before listening, a reminder of some of the vocabulary, an outline with the main headings, or a pictorial representation of the plot (McColl 2000: 40).

Partial Dictation

As an alternative to the traditional listening comprehension tasks, the FL teacher could also use partial dictation. In partial dictation, students listen to recorded speech, which they have in front of them as a written script (Pihko 2003a: 15). Parts of the text, which are the length of a few words, have been left out of the written script, and the students are required to fill in the gaps according to what they hear on tape (Pihko 2003a: 15). There are usually pauses on tape to allow students to do the

filling. The exercise can be done during a single listening or so that the text is listened twice and the filling is done during the second listening (Pihko 2003a: 15).

Partial dictation is also used in the matriculation examination and so it would be good if students had a chance to practise it. It has been found that partial dictation is a good way of testing students' listening comprehension skills and also their general FL skills (Pihko 2003a: 17). In order to fill in the gaps in the text correctly, the listener needs to understand the larger context, in other words, the whole story that is being listened to (Pihko 2003a: 17). Since students have the written script, they are also able to observe sound-letter correspondences and speech rhythm while they listen.

Summary Writing

Writing a summary based on listening is probably very difficult for students with short-term memory problems. Because of the matriculation examination, this test type should, however, also be practised. There are some ways to make the exercise easier. If the text contains a lot of words that are likely to be unfamiliar to the students, the teacher can list some of the words on the board before listening (Kristiansen 1999a: 19). The text should naturally be listened with pauses so that students are able to make notes (Kristiansen 1999a: 19).

Kristiansen (1999a: 19) suggests that the task could be varied so that students could write the summary either in Finnish or English according to their skills. The teacher could also ask students to summarise the contents orally instead of writing. This could also be done either in their native language or in the foreign language.

Practice at Home

If students feel that they do not get enough practice in school, some suggestions could be made how they can practise their listening comprehension skills at home. Since modern course books include CDs or CD-ROMs by which students are able to listen to the texts, it could be suggested that students listen to the texts that are dealt in the course and follow the text in their book. Also listening to the texts without the book is good exercise in listening skills. Some of the CD-ROMs also include additional listening comprehension exercises which students can be encouraged to do

for extra practice if they wish. There are also a lot of listening comprehension tests at schools because of the matriculation examinations so at least the older ones could be offered for students to be used as extra practice.

Naturally students could also be encouraged to seek other opportunities to hear English. For example, students could be asked to watch television news in English or soap operas, in which the characters generally use rather simple and repetitious language offering language learners good opportunities to practise their listening comprehension skills. Those who have DVD players can watch films with English subtitles or no subtitles at all. Also listening to music and radio programmes in English is good practice.

4.2.2 Speaking and Pronunciation

4.2.2.1 Core Problems

The problems in pronunciation are often very much linked to the problems in listening. As well as in listening, difficulties in pronunciation are caused by problems in processing and interpreting auditory information (Moilanen 2002: 68). If a student's auditory filter is not efficient and precise enough, it is very difficult for him/her to distinguish similar sounds and thus also produce them correctly (Moilanen 2002: 68).

It is important to note that confusion about sounds is reflected not only in weak listening comprehension and pronunciation skills but also in other areas. As Moilanen (2002: 71) points out, students may make spelling errors because they write words as they hear them and mix the spelling of words that sound similar. They may also have problems in reading because their phonological channel works poorly, and they may make grammatical errors because they do not hear such grammatical words as prepositions and conjunctions. Also students' difficulties, uncertainty and unwillingness to express themselves orally may be due to problems with phonological processing.

Because of the extent the problems in auditory processing may cause, it is essential to improve students' basic skills in both producing and identifying sounds (Moilanen 2002: 71). It is only after students learn to produce and identify different

sounds that they are able to identify words as wholes and focus their attention to learning new words and structures (Moilanen 2004a: 11).

Oral expression in general is usually the strength of dyslexic students (Moilanen 2002: 231). However, as the ineffective functioning of the auditory channel may result in difficulties in processing auditory information, it may be difficult for some students to react to the speech of others and keep up the conversation (Moilanen 2002: 231). Difficulties in oral expression can also be caused by problems in naming and retrieval (Pitkänen et al. 2001: 84).

4.2.2.2 Suggested Solutions

Pronunciation

The first step in pronunciation training is to introduce students to the phonetic alphabet. Since the phonetic alphabet is used in course books and dictionaries, it is important to instruct, or in upper secondary school, to remind students of how to use it. When students know the phonetic alphabet, they can learn the spoken forms of words as well as their written forms when they memorise vocabulary. Also for the teacher, it is easier to teach pronunciation when students know the phonetic alphabet. It can be presented to students with the help of different kinds of exercises. For example, the teacher can give students a list of phonetic symbols along with a list of example words containing these sounds, and the students' task is to match both sets (James 1991: 325). Or, students can be asked to categorise a list of example words into two or more groups according to the sounds they contain (James 1991: 326). Students can also be given words spelt in the phonetic alphabet and asked to write them in their normal written form, or the other way around (James 1991: 326).

Since dyslexic students often have poor auditory processing skills, it is important to provide explicit instruction on how to move specific mouth parts to produce the FL sounds correctly (Schneider and Crombie 2003: 52). This is naturally something that needs to be done from the beginning of FL studies but it is important to give students opportunities to refresh their basic knowledge of English pronunciation also in upper secondary school. It is particularly important to pay attention to the distinctions between sounds (Moilanen 2000a: 16). For example,

making a distinction between words that contain the /v/, /w/ and /f/ sounds or the difference between /p/ and /b/ sounds could be practised.

The FL teacher can also help students to identify sounds better by exaggerating and prolonging difficult sounds and stressed syllables so that the brain has more time to process the information (Moilanen 2000a: 17). Difficult words and sentences can be segmented and repeated, and also different kinds of sound associations can be used (Moilanen 2000a: 17). In making sound associations, students may be asked to think what a particular sound reminds them of. For example, different s-sounds can be described as a water hose, drill, bee, and so on.

In addition to practising the pronunciation of individual sounds, it is necessary to practise pronouncing words. At this level, the practice should concentrate on how sounds function in different environments and how syllables are stressed (Moilanen 2002: 81). Finally, students need to practise prosody. It is particularly important to pay attention to prosody because it helps students in understanding speech (Moilanen 2000a: 17). It is important to practise tying words together, unstressing certain connective words and thus rhythming the speech in order for especially the dyslexic students to identify the word boundaries (Moilanen 2000a: 17).

If it is just possible, it is very useful to ask students to record their own speech on tape and then compare it to the model. This is useful because hearing one's own speech helps in the cooperation between the ear and the mouth parts that are involved in the pronunciation (Moilanen 2002: 73). Rather than forcing students to read texts out loud alone, they could be asked to read in chorus (Moilanen 2002: 72) or along with the tape (Ehrman 1996: 194). Students could also be encouraged to practise pronunciation at home so that they first listen to a text on tape, then listen to it again repeating the text silently, and finally repeat the text aloud after the tape (Ehrman 1996: 194). Also providing the opportunity to read the texts in the course book with a partner in class encourages students to read aloud in a non-threatening situation. The teacher can go around in the class and offer his/her help when asked or when s/he hears a word pronounced misleadingly. Correcting students' pronunciation should, however, be done with care and encouragement so that they do not feel completely rejected.

The difference between Finnish and English in the levels of phoneme-grapheme correspondence is an important factor when Finnish people are learning English. Naturally this is also a matter which needs to be tackled at the beginning of

English studies. Pupils need to be instructed to pay attention to the grapheme-phoneme relationships in English and to the differences between the written and spoken forms of English words. For some students, however, the inconsistency of the English phoneme-grapheme system continues to cause problems in upper secondary school. Pollock and Waller (1994: 33) suggest that pronunciation and spelling could be rehearsed by finding rhyming words or syllables. Students could be asked to discriminate between or find words that have common beginnings (e.g. tip, tap, tub), endings (ten, pen, men) or vowel sounds (see, sea, meet, beat), or pick the odd one out (bun, jam, fun, sun).

Speaking

Practising listening comprehension and pronunciation skills naturally helps students to develop their oral expression as well. Speaking skills are usually practised through the traditional pair and group discussions. Often the texts that are read in class give incitements to pair or group discussions. The vocabulary is familiar to students and students are able to give their own opinions on the subject. Pair discussions can also be created so that the partners are given slightly different information and their task is to come into consensus (Tuokko 1997: 18). It is also good to bear in mind that students usually find it more interesting when they can talk about issues that are close to them: their family, hobbies, interests and so on.

Speaking skills can also be practised through tasks in which students are required to react to situations, keep up the conversation, or use compensation strategies (Moilanen 2002: 232). For example, students could be advised to use synonyms, simpler words and structures, and facial expressions and gestures when they do not know how to express themselves (Mäkinen 2003: 12). Also teaching students to use expressions that show they are paying attention to the conversation (really, I see), filler expression (well, yes), and hesitation devices (er, hm) may help them to become more fluent speakers (Ehrman 1996: 195). These strategies could be practised, for example, by introducing a topic about which students are required to talk with a partner for two minutes so that there are no pauses in the conversation.

Although students may feel that it is difficult to express themselves orally, they should be encouraged to use English as much as they can in class (Pitkänen et al. 2001: 84). The teacher should emphasise that the goal of speaking is always to get

the message through and therefore grammatical accuracy is secondary to the communicativeness of the message. Since it is often difficult for average monolingual people to switch from one language to another, it is good to provide the students an opportunity to “warm up” their English. They could, for example, be asked to read a familiar text aloud in chorus before starting the actual speaking exercise (Tuokko 1997: 18).

Since students’ oral skills are not tested in the matriculation examination, teaching in upper secondary school sometimes lays too little stress on practising oral expression. However, particularly for dyslexic students, it is important that they also have opportunities to express themselves orally because it is usually their strength. Especially providing opportunities to use the language creatively is important for dyslexic students (Moilanen 2002: 232).

4.2.3 Reading

4.2.3.1 Core Problems

Comprehension problems and slowness in reading are typical for students with dyslexia and FL learning disabilities (Moilanen 2000c: 12). Weaknesses of short-term memory and difficulties in organising thoughts are also common. There may be deficits in processing visual information, due to which it is difficult to identify letters, letters seem to be moving, jumping, or switching places. It may be difficult to stay on line and also lines can switch places. Moving in the text, moving from one page to another and finding the right place after a pause may be problematic. (Moilanen 2002: 91.)

4.2.3.2 Suggested Solutions

As with other language skills, also in reading, the best way to improve one’s skills is to practise as much as possible. However, if a student reads the foreign language very slowly and s/he has difficulties in identifying the basic words, it is very difficult for him/her to read the long and sometimes rather complex texts in the course books. Since the student needs to learn to identify basic vocabulary and sentence structures

automatically and fluently in order for his/her reading skills to improve, it is necessary to practise reading with easy texts first.

Moilanen (2002: 96–98) suggests that students with reading difficulties would be given some extra texts that are easier and more straightforward than the ones in the course book to be read in the beginning. These extra texts should be appealing so that students would genuinely get interested in reading them. Some instructions or questions about the plot could be included so that students would feel that there is some point in reading the text. Because these texts would be extra work for the students, it would be important to emphasise that the reading is not assessed in any way. The teacher could, however, check that the texts are read by asking the student to keep a reading diary (Moilanen 2002: 98), and in order to keep him/her motivated, the teacher could consider this extra work as a plus when giving the grade.

The teacher should also pay attention to the layout of texts when s/he compiles his/her own material. A white background should be avoided because the contrast between black and white often causes difficulties to dyslexic students (Moilanen 2000c: 12). Attention should also be paid to the font size and type: the font size should be at least 12 and the font type Arial or some other basic font (italics should be avoided). The layout of the text should be clear, lines short, columns narrow and line spacing adequate. It is also helpful to use boxed text and make use of colours and illustrations to break up the text. If a student has the problem of letters jumping, switching places or gluing together, the teacher could suggest reading through a coloured transparency (Moilanen 2000c: 12). Following the line can also be made easier by using a ruler or by cutting a hole in a paper and reading through the hole (Moilanen 2000c: 12).

When a new text is introduced to students in class, the studying should begin by listening to the text (Paatela 2002a: 26). Comprehension can also be aided by reading the text aloud or listening to someone else read it (Moilanen 2000c: 12). As the modern course books include CDs with the texts read on them, students should be encouraged to listen to the texts while reading at home. Also creating a film of the text, in other words imagining the text as pictures, can help in comprehension (Moilanen 2000c: 12). After the reading, students can also make a summary or a mind map of the text (Mäkinen 2003: 13).

The texts that are read in upper secondary school tend to be quite long and complex and teachers often find it necessary that they are translated into Finnish

orally. Paatela (2002a: 26) proposes that it is best for students with learning disabilities that new texts are translated into Finnish at home. There they are able to concentrate on the task better and there is no time pressure. However, it is important that comprehension is checked afterwards and students have an opportunity to ask about the text if there was something unclear. Although many students find the translation useful, it should be noted that translating a text word for word is not always necessary. Students need to learn to read texts also in other ways. In the following subsections, a closer look is taken at different kinds of reading, lexical inferring, structural awareness, and the different types of reading comprehension exercises typically used in upper secondary school.

Different Kinds of Reading

Students should be acquainted with different kinds of reading strategies because also in real life they are required to read for a variety purposes. Pollock and Waller (1994: 138) list four different types of reading which are used for different purposes: light reading, skimming, scanning, and critical reading.

Light reading is reading for pleasure and so it has no time limits and it is not necessary to recall everything that has been read (Pollock and Waller 1994: 138). Light reading is something that students with FL learning disabilities would probably benefit from. Since they are often slow readers and may have bad prior experiences with reading, they should be encouraged to read for pleasure, without any time strings. Some texts in the course books could also be read as light reading so that students would see in practice how it is not always necessary to read for the purpose of learning. It should also be emphasised that when reading for pleasure, it is not necessary to understand everything that is written.

Skimming is a process of just looking at selected parts, perhaps chapter headings, initial paragraphs, pictures, and diagrams (Pollock and Waller 1994: 138). Also skimming is an important skill to learn because it helps students to notice how much they know about the subject before actually reading the text. Before reading a new text, students can try to guess what it is about by looking at the title and pictures, and using their general knowledge of the subject.

Scanning is searching through a piece of text looking for particular facts or information (Pollock and Waller 1994: 138). Scanning is probably the most familiar

type of reading to students because course books often have exercises in which students need to find certain facts in the text. These are naturally useful exercises since they test students' comprehension as they are required to answer questions or look for words or phrases.

Critical reading requires full comprehension and analysis of what has been read, and therefore students need to detect and understand the facts, opinions, and inferences in the text (Pollock and Waller 1994: 138). Critical reading is something that upper secondary school students certainly need to learn. Critical reading could be facilitated by giving students some questions or statements about the text and asking them to express their own opinions and views for example in small-group discussions. Pollock and Waller (1994: 138) point out that before embarking on critical reading, students should establish the habit of skimming first, and decide the purpose and direction they are following. It can be, for example, a series of events, connected ideas or contradictory opinions. Students should also ask themselves what questions they can formulate in their minds that need answering. They could find answers to questions such as who, when, where, what, why, and how.

Lexical Inferring

The ability to identify the meanings of words plays an important role in reading comprehension. It is useful to practise the inferring of word meanings and word classes and to encourage students to guess meanings when they do not know a word (Moilanen 2000c: 13). Lexical inferring can be practised, for example, by underlining a few unfamiliar words in a text and students' task is to guess their meanings from the context (Moilanen 2002: 100). The teacher could also think aloud and show students how the meaning of a word can be inferred from the context (Vaurio 1999: 21). Students should learn to tolerate uncertainty and accept the fact that they can never know all the words. It could also be useful to show how we use the context to infer word meanings in our native language when we do not know what a word means.

Also practising word formation and teaching students how to chop words into smaller units in order to see their meaning are good ways to develop students' skills in semantic inferring (Moilanen 2000c: 13). Instruction in word formation is particularly important for dyslexic students because due to their problems in

phonological processing, they do not automatically see the invisible borders between different parts of a word.

Structural Awareness

Problems in reading comprehension are often caused by difficult sentence structures and therefore it is important to show students how they can find clues of where to start taking difficult sentences into pieces (Moilanen 2000c: 13). Being able to identify parts of speech and knowing the rules of word order are important in order to understand sentences. For example, finding the subject and predicate is a good way to start unpacking a difficult sentence.

Identifying different word classes or parts of speech can be practised by looking for them in a text. For example, students can be asked to find all the adjectives or all the predicates in a text. Alternatively, students can be given a text from which some words are missing, and their task is to add words that fit to the gaps (Moilanen 2002: 101).

Grammatical words (articles, prepositions, and particles), which are very frequent in English, often pose difficulties for dyslexic students. The teacher can help students to understand the function and importance of grammatical words by leaving them out of a text and asking students to find out what the text is about based on the vocabulary words (nouns, verbs, adjectives, adverbs). When students notice that something is missing, they can be asked to consider what it is that is missing and how they could make the text easier to understand. The use and function of grammatical words in English can then be compared to the use and function of endings and other means of expression in Finnish. (Moilanen 2000c: 13.)

In addition to sentence structure, also text structure is an issue that students need to be made aware of. Usually texts are structured so that they have three different parts: the beginning, the actual treatment of the subject, and the ending. Also narrative texts have three parts: the beginning in which the background, events and characters are introduced; the plot which takes the story forward; and finally the ending which reveals the conclusion to the story. Students could be asked to compare different kinds of texts and find similarities and differences between them (Moilanen 2002: 104). By directing students' attention to text structure, the teacher can help students to understand that there are some general rules how texts are structured and

that these rules may help students in both reading comprehension and writing their own texts. Other ways of guiding students to consider text structure are, according to Moilanen (2002: 104–105), summarising, coming up with titles for texts, forming questions based on texts, organising text parts into cohesive texts, displaying the plot of a text in the form of a mind map, combining texts to appropriate pictures, and arranging the pictures of a comic strip in the right order and adding texts to them.

Reading Comprehension Exercises

Texts in course books are often followed by different types of exercises which require the students to find certain facts or answers in the text. Also in the matriculation examination, different types of reading comprehension tasks are used. Below, there are some suggestions on the use of these different types of reading comprehension exercises.

Since dyslexic students often have difficulties in moving in the text, multiple choice questions cause problems for them and it would be better to use open-ended questions (Moilanen 2000c: 13). However, since the matriculation examination includes reading comprehension tests with multiple choice questions, the students should be given opportunities to familiarise themselves with this type of exercise as well.

Choosing the right alternative in multiple choice questions can be quite challenging for students. It could be a good idea to show students explicitly how to proceed with this type of task. The teacher could advise students to begin by reading the text in order to get a general view on the topic it deals with. Then, students could be advised to read each question and alternative answer carefully, and reread the paragraph that corresponds to each question. They could also underline the parts that seem to answer the questions. After this, it could be suggested that students take another look at the questions and alternative answers and decide which ones are definitely incorrect. Finally, students choose the answer which corresponds most closely with the wording or idea presented in the text. The teacher could ask students to apply this step-by-step procedure to a text in class so that they really understand how it is done in practice.

Like in listening comprehension, also in reading comprehension, open-ended questions, particularly when they are in the students' native language, are a good way

to check whether the text has been understood (Kristiansen 1999b: 12). Kristiansen (1999b: 12) points out that open-ended questions are especially useful when the questions are posed so that the answers to them form the core of the text. Also asking students to think of their own questions about the text is a good way of making sure that the students really understand what they read (Kristiansen 1994: 9).

Sometimes students could be asked to write a summary or draw a mind map of a text that they have read. In both cases, the students are required to use their own words to present the main points of the text. These activities help the students to understand the whole text and also to remember the details related to the main idea.

4.2.4 Writing

4.2.4.1 Core Problems

Many students with dyslexia and FL learning disabilities have difficulties in producing written texts. Some students may even have developed a phobia towards writing or they feel that they have to concentrate just on the structural aspects of writing at the expense of creativity (Moilanen 2002: 111). Writing may be very slow and laborious, handwriting is messy and there is a continuous uncertainty of the correct spelling of words, the correct word choices, and grammatical structures (Moilanen 2002: 111). Students may have difficulties in organising their thoughts and starting a writing task. Sentences are overly simple or structurally erroneous (there are too many words or words are missing), and word order is often incorrect (Moilanen 2002: 111–112). Dyslexic students often write words as they are pronounced and their letters get mixed up or the letters are not distinguishable from each other (Moilanen 2002: 112).

4.2.4.2 Suggested Solutions

Since students with FL learning disabilities often have negative experiences of writing, it is important to encourage them to find the joy of writing again. Students should also be encouraged to read as much as possible since inadequate reading experience in the foreign language is reflected on writing as weaknesses in using

different sentence structures, the scarcity of text, and difficulties in organising thoughts and texts (Moilanen 2002: 116).

In order for students to find writing an enjoyable experience, the teacher needs to offer a lot of positive feedback and the opportunity to improve their writing based on the feedback (Moilanen 2000c: 13). The writing process can be made easier by simply using topics that students are really interested in, and students can also be encouraged to write just for themselves without anyone correcting their writing (Moilanen 2000c: 13).

It is also important to consider how the teacher deals with the essays. Instead of a red pencil, the teacher could make his/her markings by a lead pencil and leave the actual correction to the students (Moilanen 2000c: 14). The time saved here could be used to writing constructive feedback. Besides spelling, the teacher should pay attention to the originality, fluency, and consistency of the writing, and also how the individual student has developed in his/her writing skills (Moilanen 2000c: 14).

Organising Thoughts

Organising their thoughts is difficult for many students: they do not know where to begin and how to proceed (Moilanen 2000c: 13). Pollock and Waller (1994: 135) point out that many dyslexic students feel they have better recall for diagrams and pictures than for words. Therefore linear notes may not be as effective for them as mind maps when they are planning essays. In mind maps, the main topic is written in the centre of the page. Main themes are gathered around the main topic and a line is drawn from the theme word to the topic. As each theme is expanded, further lines branch out. The points can further be linked and sorted into a logical order for essays with colours and numbers and possibly even with pictures. (Pollock and Waller 1994: 135.)

Another way of easing the writing task is process writing. In process writing, students first write a sketch or a plan for their essays, then they present their plans in a group and get feedback and new ideas, and after this they proceed in writing their essays (Moilanen 2000c: 14). Students can also be given a chart where the necessary parts of an essay (title, beginning, the actual handling of the topic, ending) are listed, perhaps with some more detailed questions, and students are thus able check from the chart that they have covered each part in their essay (Moilanen 2002: 130).

Students can also be given grammar check lists which they go through before they give their essays in (Moilanen 2000c: 14).

In addition to practising the actual writing process, it is helpful to read different types of texts and discuss how the topic is dealt in them and how the text is structured (Moilanen 2004a: 12). This helps students to see how different kinds of texts could be written and what parts texts usually have (Moilanen 2004a: 12). Naturally also writing different types of texts and paying attention to the requirements that the text type sets for the writing helps students to become more capable writers.

Expressing Thoughts

As well as organising thoughts, also expressing thoughts causes problems for many students. Therefore, it is a good idea to teach students how to elaborate their ideas, find synonyms for words, and combine sentences by using conjunctions (Moilanen 2000c: 14).

Students can be asked, for example, to elaborate their sentences by adding as many parts of speech (such as manner, place, and time adverbials) or by adding adjectives and different kinds of descriptive and information-enhancing phrases (Moilanen 2002: 137). Also finding synonyms for words so that for example ten words in the essay are underlined and replaced by a word or phrase that means the same thing (Moilanen 2002: 137–138).

The use of conjunctions can be practised by reading a text from which all conjunctions have been left out (Moilanen 2002: 138). Students are then asked to consider how thoughts and sentences could be linked to each other, and their suggestions are compared to the original, complete text.

4.2.5 Vocabulary

4.2.5.1 Core Problems

Memorising and retrieving vocabulary items is challenging for all language learners but it can be particularly difficult for dyslexic students because they often have poor short-term memory skills and/or visual/auditory memory problems (Schneider and

Crombie 2003: 50). Words that sound or look similar may get mixed, and identifying words both in listening and reading may be difficult (Moilanen 2002: 193). Dyslexic students also often have problems in word formation, and so they find it difficult to take long words into meaningful pieces (Moilanen 2002: 193).

In learning English vocabulary, the difference between the written and spoken form of words causes difficulties for students. Students may get the written and spoken forms mixed, or they are not able to connect them to each other (a written word is not understood before it is heard, or a spoken word before it is seen in writing) (Moilanen 2002: 196).

4.2.5.2 Suggested Solutions

Because of the different written and spoken forms of English words, it is important to make sure that students have opportunities to practise both forms. Therefore, it is important to practise vocabulary in many different ways: reading, writing, speaking, and listening.

In order to learn new vocabulary items, new mental linkages need to be created (Oxford 1990: 40). Ehrman (1996: 194) suggests that new words should always be studied in specific contexts since linking the word to the context helps to remember its meaning. Similar views have also been presented by Oxford (1990: 40–41), Kristiansen (1999c: 11), and Moilanen (2002: 202). Kristiansen (1999c: 11) points out that words that are learnt in isolation are not attached to the previously learnt material and thus they are more difficult to remember. In other words, the learner needs to link new words into his/her existing information structures. Only after words have been practised in a context should they be studied in isolation (Ehrman 1996: 194).

Also grouping words into meaningful categories is useful. Making links between words that are semantically close to each other is important since that way the words are also easier to memorise and retrieve later from memory (Ehrman 1996: 195, Moilanen 2002: 203). It should also be noted that grouping is most effective when the learner does it him/herself (Kristiansen 1999c: 12). This is because when the student groups the words, s/he is forced to process them and this naturally increases the effect of learning (Kristiansen 1999c: 12). Groups can be arranged as lists or in the form of a mind map. Particularly for visual learners, a labelled diagram

or picture, or a layout of words that makes clear the relationships between words could be good ways to memorise words (McColl 2000: 29). Groups can be based on type of word (e.g. nouns), topic (e.g. words about family), similarity (e.g. warm, hot, tepid, tropical), dissimilarity or opposition (e.g. usual/unusual), and so on (Oxford 1990: 40–41). Also word formation can be practised by grouping words. As dissimilarity and opposition is often expressed by prefixes (in-, im-, un-, dis-) in English, they can be learnt when the root word is learnt (Kristiansen 1999c: 12). Also other frequent prefixes and suffixes could be used to expand the group of related words.

Vocabulary can also be memorised by using flashcards on which the students have written English words on one side and their Finnish equivalents on the other side. Since visual learners may find it easier to remember words if they associate them with visual images or pictures, these could be added to the cards (Ehrman 1996: 194). The cards can also be of different colours according to the word classes. Students can then arrange the cards on piles on different bases: the words of different word classes can be put on different piles, or students can put the cards on different piles according to the level of how well they have succeeded to memorise them. This is particularly helpful for kinaesthetic learners as they are able to handle the cards and move them around.

Repetition is very important in memorising vocabulary. Both visual and kinaesthetic learners benefit from writing the words down many times and using colours and boxes to stress difficult letters or letter strings (Moilanen 2002: 199). Auditory learners, on the other hand, benefit from having an opportunity to say the words aloud. They could try recording vocabulary lists that they would like to memorise and listen to them and repeat several times (Ehrman 1996: 195). Students could also try reading a word list or listening to someone else read it while listening to music (Moilanen 2002: 207).

Students with learning disabilities often have a need to use words in concrete situations in which they can imagine finding themselves (Moilanen 2002: 202). Therefore, different kinds of situations can be simulated in which students are required to use the new words. Moilanen (2002: 202) suggests that, for example, vocabulary in politics could be practised by imagining a situation where the student is at the airport and is asked to act as an interpreter for a Finnish group of ministers.

Space vocabulary, on the other hand, could be practised by imagining a situation where the student is inside a spacecraft (Moilanen 2002: 202).

Although all learning styles cannot be considered all the time in the classroom setting, the teacher can provide opportunities to students with different learning styles to learn vocabulary by using as diverse exercises as possible. For example, rehearsing vocabulary by playing Alias or Pictionary provides an opportunity for learners of different sensory preferences to experience feelings of success. In Alias, one student explains a word and the others try to guess what word s/he is talking about. In Pictionary, a student tries to express the word by drawing (and is not allowed to speak) and the others try to guess what word s/he is drawing.

Since kinaesthetic learners benefit from using their own body in learning, students could also be asked to perform the words that are to be learnt to their partner who tries to guess which word is in question (Moilanen 2002: 205). Also connecting words written on pieces of paper to the objects or pictures of the objects that they represent provides opportunities for kinaesthetic learners to use their hands (Moilanen 2002: 205). When memorising vocabulary outside the classroom, kinaesthetic students could also try writing the words they want to learn on a piece of paper which they occasionally look over during a walk or some physical activity (Moilanen 2002: 205).

For visual students, it could be useful to teach them to visualise words (Hintikka and Strandén 1998: 122, Moilanen 2002: 199–200). In visualisation, the student is asked to think of a person or character s/he likes. Then s/he is instructed to observe where his/her eyes are directed when s/he retrieves the memory of this person. This is the place where s/he stores the pictures of the things s/he sees. Then the student is asked to write the word that s/he wants to learn down on a paper, photograph the word with his/her eyes, and direct his/her eyes to the place where his/her memory storage is. Then s/he is asked to imagine that the person s/he chose is showing him/her a note on which the word has been written. Now s/he can look at the word and try if s/he is able to spell it letter by letter. At home, visual students could also stick words on slips of paper around the house on places where they can see them. This way, the words are constantly in sight and students are able to check the words many times a day.

Students could also find using the keyword method useful. The key word method is based on the association between two words: the learner associates the

new foreign word with a similar word in his/her native language or some other language (Moilanen 2002: 208). The learner can then create an image in his/her mind or draw a picture in which both the concepts are present (Moilanen 2002: 208).

It is important to explicitly teach students how to use different kinds of word memorisation strategies. Moilanen (2002: 211) suggests that the teacher would introduce one strategy at a time to the students and they would use the strategy to learn the words of the current chapter. Afterwards, there could be a discussion on how well the strategy worked. Thus, students would have a chance to try each strategy in practice and determine which works best for them.

4.2.6 Grammar

4.2.6.1 Core Problems

Difficulties in understanding grammatical concepts and structures have been found to be common for students with FL learning disabilities (Downey and Snyder 2000: 84), and dyslexia (Moilanen 2000b). Since dyslexic students often have difficulties in seeing patterns, finding rules, and understanding abstract grammatical terms in their native language, it is natural that they have similar problems in FL learning (Moilanen 2000b: 8). Students may see grammar as separate from the language: they do not understand the use and function of grammatical rules in real life situations and it is also unclear to them how different rules are linked to each other (Moilanen 2002: 149).

4.2.6.2 Suggested Solutions

To make the learning of grammatical structures more down-to-earth and motivating, the teacher should consider a few things. Moilanen (2002: 152) suggests that the teacher should explain four things about each grammatical issue: its function (why and for what purposes the form, rule, or category is needed), its position in the language system (what links it has to other structures), its use value (how important a form, rule, or category are we talking about), and its application in communication situations. By explaining these things to students, the teacher helps them to see the structure as part of the language system in real communication situations and not just

as a separate rule that they need to know in the exam. Students need to know for what purposes they are learning certain rules and what they are expected to do with them. They need to know whether they are required to be able to produce these structures or whether they just need to be able to identify them when they encounter them in written text or speech.

The teacher could also consider the use of grammatical terms. As foreign grammatical terms often cause problems for dyslexic students, grammar instruction should not rely on the command of terms (Moilanen 2002: 156). However, since the use of terms cannot be avoided entirely and knowing them is vital for some students when they are applying for further education, the terms could be put forth for those who are interested (Moilanen 2002: 156). In order to avoid confusion, the FL teacher could check that the terms that are used are the same that the students have been used to in their native language (Paatela 2002a: 26).

In the discussion about grammar training, a regularly approached issue is the difference between deductive and inductive learners. Deductive learners like to go from the general to specific whereas inductive learners like to go from specific to general (Felder and Henriques 1995: 26). Therefore deductive learners prefer grammar to be taught by introducing the rules first and then applying the rules to examples. Inductive learners, on the other hand, prefer to begin with the examples and make up the rules based on the examples. These two types of learners are certainly a challenge for the language teacher since it is impossible to use both the approaches at the same time when facing the whole class. Therefore, it is probably necessary that the teacher reaches a compromise between the approaches and tries to use them varyingly in order to provide opportunities for both types of learners to study grammar in the way they prefer. For example, when a grammatical issue is dealt on two lessons, on one lesson, the approach could be deductive and on the other inductive.

Grammar issues could be approached inductively by studying language samples and paying attention to certain forms and encouraging students to make up their own grammar rules (Ehrman 1996: 194, Moilanen 2000b: 9). Afterwards students could compare the rules that they have formed to those in their grammars. A deductive way to approach grammar would be to explicitly teach students the rules or ask students to study them by themselves. After becoming familiar with the rules,

students could be asked to practise the structure by different types of exercises or make up examples of the rule.

Many students benefit from an analytical approach in which the steps needed for getting to the goal are made visible (Moilanen 2000b: 9). This means that grammatical structures need to be broken up to pieces so that students can see all the components of the structure and understand how they can form this structure step by step. Also making comparisons to corresponding structures in the native language can help students to understand the FL patterns (Moilanen 2000b: 9).

Students can also be helped to remember grammatical structures by using pictures, colours, boxes, charts, arrows (cause and effect), and mind maps (Moilanen 2000b: 8). Dyslexic students have been found to benefit from the use of a colour-coding system to simplify the retrieval of different grammatical patterns (Schneider and Crombie 2003: 54). For example, for sentence structure patterns, each part of speech in a specific role in the sentence can be given a specific colour. The teacher introduces new grammar concepts explicitly by using the same colour-coding system for each grammatical function in the sentence. Students, on the other hand, can use colour-coded cards on which different words for different sentences are written.

In order to remember a specific rule, students can memorise an illustrative example of the rule and refer to this example as a model when they need to remember the rule (Ehrman 1996: 194). Also using creativity, humour, and imagination helps students to internalise grammatical issues because they integrate the right brain hemisphere which dyslexic students often use in processing and structuring information (Moilanen 2000b: 8).

Since writing is often troublesome for dyslexic students, it is good to practise grammar also orally (Moilanen 2000b: 9). Luckily, the book publishers have also understood this and course books include quite a lot of exercises for oral grammar training. Students can do oral exercises more than once and there are no ready answers offered by the previous owner of the book. Multiple choice questions and gap-filling tasks should be avoided because dyslexic students often have difficulties in moving in the text (jumping from one page or line to another) (Moilanen 2000b: 9). However, since these are test types that are used in the matriculation examination, they cannot be fully ignored.

It is also important to give students time to process the new grammatical issue and thus dividing the practice to more than one lesson is a good idea (Moilanen

2000b: 9). Also using many different kinds of exercises and letting the students choose the ones that they find the most useful for themselves provides more opportunities to internalise the structure and succeed in completing the task. The teacher should also consider alternative ways of explaining grammar rules. If students do not understand a rule or structure even after a long practice, the teacher should think of a way to explain it in a different way.

4.3 Examinations and Evaluation

The curriculum states that all the areas of language learning (listening, speaking, reading, and writing) are to be taken into consideration in assessment according to the different stress given on each area on different courses (*Lukion opetussuunnitelman perusteet* 2003: 100). Testing students' listening, reading, and writing skills is, I presume, a standard procedure in most upper secondary schools but when it comes to testing students' speaking skills, practices are more varied. In an inquiry conducted by SUKOL, less than half of the FL teachers reported that they arranged oral tests (SUKOLin kysely 1997). Teachers also had differing views on the importance of oral tests: some saw that oral testing is not practical since it requires so much time and work from the teacher whereas others thought that it is very important to test students' speaking skills (SUKOLin kysely 1997).

In upper secondary school, teachers' views on oral testing are probably influenced by the fact that students' speaking skills are not tested in the matriculation examination. Students have an opportunity to take part in an optional oral test, which does not, however, have an effect on their grade in the matriculation examination. It was found in a study conducted by SUKOL that the optional oral exams were organised in 57 per cent of the upper secondary schools that took part in the study (Saarinen 2000: 10). It was also found that schools did not have equal opportunities to organise them because the organisation of oral tests requires both time and money and all schools do not have the same resources (Saarinen 2000: 11). Students' willingness to attend the oral exam also seemed to be affected by the fact that it has no significance when they later apply for schools (Saarinen 2000: 11). Teachers, in turn, felt that they did not have the required training to test and assess students' oral skills (Saarinen 2000: 11).

It seems that in order to establish the position of oral exams in upper secondary school, oral testing should be included in the matriculation examination. Since it is probable that oral tests become part of the matriculation examination in the near future, it is important that teacher have the required skills and knowledge on how to prepare their students for the test (Myller 2004: 279). Therefore training both in teaching and assessing speaking skills should be offered to FL teachers as soon as possible.

Since the disfavour of oral tests is partly due to organisational problems, this is something that needs to be settled. Arranging time and place for oral tests is rather difficult in the quick pace of FL courses. In the current situation, it seems best that instead of having students tested on each course, they are provided with opportunities to practise oral expression in class and asked to assess each other's performance as Tuokko (1997: 19) suggests.

Although the focus in this study is on written exams and how to coach students to prepare for them and be better test-takers, teachers could also consider whether it is possible to give up written tests altogether and assess students based on their work during the course and perhaps by using portfolios. Portfolio work has many advantages. In portfolio work, students have the opportunity to deal with themes that they find meaningful and interesting, which supports autonomous learning and the feeling of authenticity (V. Kohonen 2003: 11). Portfolio work also promotes students' awareness of language learning by increasing their understanding of themselves as learners and making the goals, concepts and skills of studying more concrete (Kohonen 2004b: 11). Portfolios are also documents of students' language skills and their progress (Kohonen 2004a: 9). Since portfolio work is part of the common European frame of reference for languages (see for example Kohonen 2004a), it is very likely to have a significant role in future language education. Therefore, it is something that the FL teacher could consider as an alternative to the traditional exams.

Since written exams are probably still the most common way of assessing students' FL skills in upper secondary schools, more detailed suggestions are made concerning them. Particular attention is paid to practices that support students with FL learning disabilities. Schneider and Crombie (2003: 58) see that there are four areas that need to be addressed to make successful test results realistic for dyslexic students. The teacher needs to provide explicit instruction of both test preparation

strategies and test-taking strategies, s/he needs to select test tasks carefully, and provide appropriate test-taking modifications. Finally, the FL teacher needs to consider how students are assessed and how s/he gives feedback on their performance (Moilanen 2001b: 20).

4.3.1 Instruction of Test Preparation Strategies

Students with dyslexia and FL learning disabilities typically have problems in preparing for the examination (Moilanen 2001b: 18). All students naturally benefit from test preparation instruction but dyslexic students are often doomed to fail without this specific support (Schneider and Crombie 2003: 58). Schneider and Crombie (2003: 58) see that the FL teacher can motivate students to personally experiment with different test preparation strategies and thus students learn to evaluate which strategy works best for them. According to Schneider and Crombie (2003: 58–64), test preparation strategies that could be explicitly taught to students include mnemonic devices, multisensory studying, summary information charts, and time management and task organisation.

Different mnemonic devices and multisensory studying have been discussed earlier when dealing with the different areas of language study. If students are aware of their learning style preferences and are taught to use many types of learning strategies, they also have the tools they need when they prepare for exams. Students should also be pointed out that test preparation does not mean that they only study for the exam but that all the work that they have done on the course helps them in the exam.

Since students with learning disabilities often struggle with time management and task organisation, explicit instructions on keeping a record of exam preparation time, types of strategies used and self-observations of their effect are essential (Schneider and Crombie 2003: 63). Students often estimate the time they need for preparing for the test unrealistically: they may put the preparation off to the last minute or they may begin the preparation too early (Moilanen 2001b: 18). Schneider and Crombie (2003: 63) suggest that students would be encouraged to keep track of the time they spend on their FL studies, the strategies they use, and the effects of the strategies by using record charts.

Students could also be instructed in taking and organising their notes (Moilanen 2001b: 19). For example, the themes covered on a course can be organised in a table of contents, a new theme always starts on a new page, and different colours are used to distinguish different kinds of information (Moilanen 2001b: 19). The FL teacher may also ask the students to collect study information on summary information charts (Schneider and Crombie 2003: 61). According to Schneider and Crombie (2003: 61), these charts can be used to summarise pronunciation, spelling, and grammatical vocabulary information in simple and personalised ways. Summary charts for pronunciation and/or spelling can include, for example, the topic, the rules in the student's own words, ways to remember the rules, examples, and anything else that helps the student to remember the rules. Summary charts for grammatical information can include the same categories but additional colour-coding can be used in the examples.

Since learning disabled students often have difficulties in getting a general view of the issues dealt on a course, it might be helpful if some revision tests during the course were done in pairs or so that students were allowed to use their course books (Moilanen 2001b: 19). Students could also be given a chance to get acquainted with sample exam papers (Pollock and Waller 1994: 141–142). This kind of arrangement could help the students to see what is essential and what they are expected to know in the final test (Pollock and Waller 1994: 142, Moilanen 2001b: 19). Students could also learn how much time they can afford to spend on each question. Pollock and Waller (1994: 142) see that this familiarity can give students confidence before they begin the actual exam. Moilanen (2001b: 19) also suggests that before the test, the FL teacher could give the students check lists where all the central themes and chapters, important page numbers, leading and revisory questions, mind map tasks and suggestions for time management were gathered.

4.3.2 Instruction of Test-Taking Strategies

As well as test preparation strategies, also test-taking strategies are particularly important to dyslexic students (Schneider and Crombie 2003: 64). If they are not provided with test-taking strategy instruction, dyslexic students will probably not be able to be successful despite having invested a lot of time in preparing for the test (Schneider and Crombie 2003: 67).

In general, the FL teacher is able to help the dyslexic students by providing the task instructions in the native language instead of the foreign language (Schneider and Crombie 2003: 71). Also providing the instructions orally and going through the test together at the beginning of the test situation may help dyslexic students to complete the tasks more successfully (Moilanen 2001b: 19). Schneider and Crombie (2003: 65) see that it is important to explain at the beginning of each test that students can ask questions if they do not understand a test task. According to Pollock and Waller (1994: 141), students should also be explained that the questions in a test can be answered in any order. It is a good idea to start with the tasks that one feels that they know best because it often helps to relax and gives more confidence (Pollock and Waller 1994: 141, Schneider and Crombie 2003: 66). In reading comprehension tasks where the text and the questions are on different pages, it is good to advise students to separate the pages so that they can be viewed side by side (Moilanen 2001b: 19–20). This helps in keeping track of the text and it also reduces the workload of the short-term memory (Moilanen 2001b: 19).

The teacher should also instruct students on how to analyse the test tasks instead of rushing to answer questions in a panicky fashion (Schneider and Crombie 2003: 65). Dyslexic students often find it difficult to estimate how much time each task in the test takes, and they may also feel anxious about the time running out (Moilanen 2001b: 18). Before writing their answers in grammar tasks, students could be advised to write down the rules that are needed in the task (Moilanen 2000b: 9). In this way, they do not have to think about the rules and each point in the test at the same time: they can write down what they first thought and then change their answers according to the rule (Moilanen 2000b: 9).

Once the FL teacher has identified the types of test tasks that will appear in the examination, s/he may provide explicit preparation strategies specific to the test tasks (Schneider and Crombie 2003: 66). For multiple choice or matching tasks, Schneider and Crombie (2003: 67) suggest that the strategy of first eliminating what is definitely not the right answer may not work for dyslexic students. Instead, students can be shown how to look for keywords to identify the correct responses in such tasks. In gap-filling tasks, Schneider and Crombie (2003: 67) propose that choices should be provided below or above the gap to give the dyslexic students at least some chance of success. This makes it far easier for the students to fill in the gap since they do not have to jump from one place to another to read the choices. Students

should also be aware of the types and sequences of thinking steps that need to be used to find the correct answer to fill the gaps. For short sentence responses, Schneider and Crombie (2003: 67) suggest that the FL teacher shows how students can use text organisation strategies in the test situation. Students can be encouraged to use colour markers to identify essential parts of sentences and text parts as practised in class.

It is also a good idea to discuss the issue of test anxiety in class. Students can be encouraged to try different kinds of breathing and relaxation techniques and to learn self-motivating mantras (Schneider and Crombie 2003: 68). Also allowing students to approach the FL teacher during the test may remove many anxiety factors (Schneider and Crombie 2003: 68).

4.3.3 Selection of Test Tasks

When selecting the test tasks, it is important to take into account what kinds of tasks the students are familiar with. When the task types are familiar to the students, they are more likely to be able to show their knowledge. The teacher could also think if it is possible to include alternative task forms in the examination (Moilanen 2001b: 20). Then students could choose the tasks that are most suitable for their personal strengths and perhaps avoid tasks that cause difficulties for them (Moilanen 2001b: 20). Teachers should also pay attention to the appearance of the test paper: clear font type, sufficient font size and line spacing, and clear layout are important (Moilanen 2001b: 19). Also the colour of the paper could be some other than white because the contrast between black and white often creates problems in identifying letters for dyslexic students (Moilanen 2001b: 19).

Gap-filling tasks should be avoided because learning disabled students often find them very frustrating. Since they usually rely heavily on context clues, dyslexic students are reduced to making wild guesses rather than being able to provide knowledge-based answers. Also matching activities may be difficult for some dyslexic students because of their poor visual perceptual short-term memory. Since writing tasks demand high concentration on content, dyslexic students are often forced to do them at the cost of correct spelling and sentence structure, and also appropriate word choice. Therefore the FL teacher should consider to what extent to count dyslexic students' errors in comparison to overall text structure and content.

On the other hand, dyslexic students benefit from the use of pictures and opportunities to express their linguistic knowledge in alternative ways, including their native language if necessary. (Schneider and Crombie 2003: 69.)

4.3.4 Test-Taking Modifications

The most essential accommodation, also used in the matriculation examination, is to provide dyslexic students with extended time to complete the test. For dyslexic students who process language tasks considerably slower than non-dyslexic learners, this accommodation provides an opportunity to demonstrate their actual knowledge (Schneider and Crombie 2003: 71–72) but it should also be provided to other students (Moilanen 2001b: 19). The fear of running out of time increases anxiety, frustration, and mistakes made in rushing through the tasks (Schneider and Crombie 2003: 72).

If a student finds it helpful and it is possible to arrange in practice, the student could be provided with the opportunity to complete the test in a separate, quiet room. If this is not possible, the student could be provided with a separate section of the classroom, for example by turning a desk to a clear wall in the back of the classroom. (Schneider and Crombie 2003: 72.)

Many students find it calming and also stimulating if they can take a break to eat or drink during the test. It has been found that water facilitates the electrical conductivity between the brain and the sense organs (see for example Dennison and Dennison 2001: 54–55). Water activates the brain to make the memorisation and retrieval process more effective and improves concentration and reduces stress. Thus providing paper cups and a water jug is a good idea (Moilanen 2001b: 20). It has also been suggested that eating may improve the concentration of some students (Prashnig 1997: 45, Hintikka and Strandén 1998: 98). Therefore, the teacher could very well allow students to bring snacks and beverages to the classroom.

The teacher could also consider the possibility of using take-home exams, which would make possible for the students to process the tasks at their own speed and in peace and quiet (Schneider and Crombie 2003: 72). It could also be considered whether it is possible to take the exam orally or at least fill in the gaps in the written exam orally (Moilanen 2002: 251). Finding the time and place may be problematic, but if the school has dictating machines, it could be possible to arrange

oral tests. An opportunity to use the computer in completing the test could also benefit some students (Moilanen 2001b: 20, Schneider and Crombie 2003: 72).

4.3.5 Assessment and Feedback

After the testing situation, the teacher needs to decide how to assess the work of different students. In matriculation examination, dyslexic students can have a better grade than they would otherwise be entitled to because of their learning disability (*Ylioppilastutkinto: Luku- ja kirjoitushäiriöiset kokelaat*). However, students face a great number of exams before the matriculation examination, and thus the teacher should consider how s/he takes dyslexic students and other students with similar problems into account in the assessment in regular exams. The teacher needs to decide how s/he reacts to spelling errors made by dyslexic students and what kind of weight s/he puts on communicative aspects (Moilanen 2002: 250).

Since assessment is far from exact science, no strict rules can be given on how to take students' learning disabilities into account. One way of taking disabled students into consideration is suggested by Moilanen (2002: 251), who proposes that the teacher could mark the words that have been written incorrectly and the student would then be asked to correct these words in order to receive the points. This would probably decrease the possibility that other students would feel that they are in an unequal position (Moilanen 2002: 251).

In order for tests to be useful to the students' future learning, it is important that students understand the teacher's markings and the basis for the assessment (Moilanen 2001b: 20). Errors should be explained and the causes for a poor achievement in a test should also be discussed (Moilanen 2001b: 20). This may be problematic if the exam is at the end of the course (during an exam week) and the teacher does not continue with the same students in the following period. Thus the teacher should be prepared to give individual feedback when s/he hands the exam papers to the individual students during breaks or whenever s/he has the time. Especially those students who have not passed the exam and have to do it again need advice on what to do differently and on what to concentrate when they study for the resit.

Moilanen (2001b: 20) also suggests that students should have an opportunity to do the test or a version of it again with the teacher or at home so that they would

notice their weaknesses. I have also found this useful with students who have failed the first exam and have asked for additional instruction before they attend the resit. By taking a closer look at each task and discussing with the student or students what the steps are which need to be taken in order to decide what the right answer is, students can be helped to see the thinking process which is needed for the completion of each task. Many students have the problem of being too hasty. They do not stop to think what they are going to write in the test, they just write down the first thing that comes to their mind. Therefore it is important to emphasise the need for certain steps before answering.

Besides pointing out the errors that the student has made, it is also important to indicate the tasks that s/he has done well. By giving encouraging feedback and emphasising the student's strengths, the teacher can give him/her hope, which is always needed for success. Students should also be given a chance to assess themselves and ponder on the reason why they succeeded or failed and how they see that their FL learning has progressed (Moilanen 2001b: 20).

5 DISCUSSION

The purpose of this study was to provide a theoretical framework as well as practical suggestions for FL teachers in Finnish upper secondary schools on foreign language learning disabilities by reviewing current literature. In order to do this, a large body of literature had to be studied and relevant information was gathered, evaluated, and finally put together to create a whole that would meet the needs of FL teachers. Using Gardner and MacIntyre's (1993) socio-educational model of second-language learning as a framework for discussing FL learning disabilities was something that has not, at least to my knowledge, been done before. With the help of the model, it was possible to consider the various factors that operate in the process of FL learning and their influence on one another. Since the complex social nature of FL learning is accounted in the model, it was possible to present a comprehensive view on the disabilities as they are experienced by students.

It has been claimed (see for example P. Kohonen 2003: 89) that there is a gap between theory and practice when it comes to learning disabilities: there is a lot of research but it is often of little value in practice since the implications for teaching practices are not made clear. Therefore there seemed to be a need for a study that would put the major findings of current research into a form that is meaningful for teachers and applicable in the classroom. Previous research has usually focussed on beginner language learners in special education settings and problems of upper secondary school students have received far less attention. However, learning disabilities are very much present also in upper secondary school and teachers need to be able to provide support for students who are having difficulties. Therefore there was clearly a need for information on the problems that older students are having in their language learning.

As it was pointed out earlier in this study, teacher training has not been very successful in educating future language teachers about different kinds of learning disabilities. As Kaikkonen (2004: 114) found in his study, future language teachers feel that they do not have the necessary knowledge and skills to work with students who have learning disabilities. This is certainly something that needs to be acknowledged when developing teacher training programmes since it cannot be assumed that new teachers learn about learning disabilities in practice or that they

attend additional courses and seminars after their graduation in order to become proficient teachers. In this respect, there also seemed to be a need for information aimed at language teachers about learning disabilities.

Although this study did not produce new information as such, it gathered the present knowledge of FL learning disabilities in one place in a form that is relevant for teachers. Since the topic is quite extensive, it was not possible to dig very deep into each area that was dealt with. On the other hand, it was possible to cover all the areas of language study, which is important from the point of view of the teachers for whom the study is intended. I also see that reviews of this type are important in order to get a good picture on what is going on in a certain area of research. They also make it easier to detect the gaps in research and thus promote further studies on areas that have not been covered yet. It is also important to review research for practical purposes because in that way the scientific theories and study results are brought closer to real life and it is possible to see what the value of research really is in practice.

The identification of students with FL learning disabilities is an issue that was not addressed to a sufficient extent in this study. This is because the identification process is so wide an issue that it would require a study of its own to be dealt with in detail. In this study, the focus was more on acknowledging students' different learning profiles and on ways by which the FL teacher is able to take these differences into account in instruction. The use of interviews and questionnaires as tools for both collecting information about the students and increasing their motivation and involvement in FL studies was recommended.

However, it should be noted that there is probably a need for administering specific tests to scan students who are dyslexic and/or have FL learning disabilities. The problem for long was that there were no tests available that would have been applicable in upper secondary school. However, the need for a test has been answered by Holopainen et al. (2004) who have developed a test for identifying dyslexic students who are over fifteen years old. Because of the novelty of the test, there is not yet information on its usefulness and whether it is really used in upper secondary schools.

Although a lot of research is carried out on FL learning and learning disabilities, there are still areas that have not been studied. In the future, it would be important to study the mechanisms of dyslexia and how it is possible that in some

cases it affects the coding of one language but not another. This type of research could also give insights into the role of dyslexia in FL learning disabilities. It would be important to develop tests with which students could be tested for dyslexia also in languages other than their native language. At the moment, there are only tests with which students can be tested in their native language (and only one of them is applicable in upper secondary school), and students whose dyslexia appears in some other language are not diagnosed. Since standardised tests that could be used to test students in foreign languages do not exist, students whose dyslexia appears only in a foreign language do not get the accommodations that other dyslexics are entitled to in the matriculation examination. Some suggestions for the kind of testing that could be used for students in foreign languages can be found in Moilanen (2004b).

However, I do not see that the biggest challenge in the future is to do more research on dyslexia and learning disabilities but to do research which has clear potential of making difference for the lives of students and teachers dealing with these problems. Therefore studies conducted in the FL classroom would also be very welcome. I also see that it would be important to question the meaningfulness of diagnosing students as disabled and investigate the influence of teaching and studying practices on the learning outcomes of dyslexic students. Perhaps more important than identifying students as disabled is that all the students are seen as individuals with their strengths and weaknesses. Tests as such are of no value: one must know what to do with the information that is obtained by them. Therefore teachers and students need to be able to identify different learning styles, use different types of learning strategies, and strive for finding their own personal approaches and motives for studying languages.

What would it require from an upper secondary school to be a good place for students with dyslexia or foreign language disabilities? The most important thing is probably that learning disabilities are recognised in the school. The whole staff should be aware of the disabilities, not just the teachers who are most often faced with them. Sharing the responsibility promotes team spirit and makes the difficulties an issue for the whole school, not just for one or two teachers. Moilanen (2004b: 10) suggests that it would be good if there was a surveillance period at the beginning of studies during which teachers monitored their students and paid attention to their progress, studying techniques and learning disabilities. After the surveillance period the teachers could hold a meeting in which they would gather their observations and

decide on further procedures such as directing students to a special education teacher and testing, measures of support and contacting parents. This kind of cooperation is important since it is frustrating if a teacher is left alone with his/her suspicions. Therefore cooperation at least between language teachers and student counsellors is essential. At the same time, teachers should remember that learning disabilities are not manifested in the same way in every subject. A student can do well in some subjects and have major difficulties in others.

There are special courses for students who have learning disabilities in some upper secondary schools. In practice, this usually means that there is one course of this kind at the beginning of the studies. This is naturally a very welcome improvement. However, arranging these kinds of courses requires sharing knowledge and cooperation between the teachers. The students who are admitted and the issues that are dealt with should be decided in cooperation so that every teacher is aware of the contents of the course. Teachers should also be informed of the effects of the course on each student's learning. If major discoveries were made concerning the learning of individual students, these would also be important pieces of information to the teachers who were not present on the course. Therefore some kind of closing discussion for the staff would be in place.

It should also be kept in mind that teachers are individuals as well. They too have their individual learning style preferences which naturally have an influence on their teaching habits to some extent. For example, it may be difficult for a strongly visual teacher to understand how some students do not learn by visual cues but instead prefer the auditory channel. Therefore, the teacher needs to acknowledge his/her biased view on learning and learn how to be more broad-minded. Probably the best way to promote his/her understanding of different learning styles and strategies is discussing them with students and getting new ideas from them. In other words, the students who learn differently from the teacher can be used as informants on the useful strategies they have come up with. It should also be remembered that students who have a long history of learning disabilities have probably developed good ways of coping. This knowledge should not be overlooked but instead it should be used in class as a source of insight both for the teacher and other students. It is a good idea to give students an opportunity to share their experiences and ways to make learning easier in class.

What the present study showed is that a lot of studies are conducted concerning FL learning and learning disabilities but that the information is scattered and needs to be made more available to the teachers who have the power of making the changes in the classroom. It was also argued that the difficulties upper secondary school students have in learning foreign languages may result from many different aspects of the learning situation as well as the student's personal characteristics. As the iceberg theory (McColl et al. 1996: 3C: 3), which was discussed earlier in this study, suggests, the students with learning disabilities are just the tip of an iceberg. The so-called average students can all the same have problems in their FL studies but their problems are just not so visible to the teacher.

Hopefully the study acts as an incentive which makes the reader think about his/her own teaching practices and how they could be developed to serve the needs of different types of learners better. The best solutions to the problems encountered in FL learning are probably the ones discovered together with students in class. It should also be remembered that learning a foreign language is characteristically challenging and contains no shortcuts. It is a problem that will probably never be solved.

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APPENDIXES

Appendix 1: Language Learning Histories

Adapted from ideas in Oxford and Green (1996)

You have studied English for many years now and you know quite a lot about yourself as a language learner. You have also experienced what it is like to study with different teachers and groups. You have probably had both good and not so good experiences in studying English. Now it is time to look back and think about your past experiences in learning English.

1. Look at the questions below and take a few minutes to consider how you would answer these questions.
 - Describe yourself as a language learner: what are your strong points and weak points?
 - What has been the best experience that you have had when you have studied English (in a classroom or elsewhere)?
 - What has been a really bad experience?
 - Describe the best language teacher that you have had.
 - Have you ever felt that the teacher's teaching style does not suit your learning style? If you have felt so, how have you coped?
 - Have you felt that some areas of language learning (speaking, listening, reading, writing, vocabulary, grammar) have been focussed too much or too little in the past? If you have felt so, how would you have changed the lessons?
2. Form a group of three or four students and talk about your language learning experiences with the help of the questions.
3. Write a short essay in which you describe your past experiences in learning English. Try to give answers to the questions above in your essay.

Appendix 2: Personal Study Goals: Course 1

Name: _____

1. In what kinds of situations do you need your English skills at the moment?

2. What about in the future? In what kinds of situations do you think you will need English?

3. What is your goal in studying English in upper secondary school?

4. What aspects of your English skills do you aim to improve on this particular course? (For example, speaking, listening, reading, writing, vocabulary, or grammar.)

5. How do you aim to achieve your goals?

6. Can you think of ways with which the teacher could help you to meet your goals?

Appendix 3: Personal Study Goals: Courses 2–8

Name: _____

Look back at the previous course.

1. What goals did you set for yourself at the beginning of the previous course?

2. What did you do to meet the goals that you set for yourself?

3. Could you have done something different in order to be more successful?

4. Do you feel that you managed to meet your goals?

5. How did your English skills improve?

6. What did you learn about yourself as a language learner?

7. What did you like on the previous course? What tasks were useful?

8. What didn't you like? What tasks weren't useful?

Now, think about the course that is beginning.

9. What aspects of your English skills do you aim to improve on this particular course? (For example, speaking, listening, reading, writing, vocabulary, or grammar.)

10. How do you aim to achieve your goals?

11. Can you think of ways with which the teacher could help you to meet your goals?

12. Write down if you have any wishes concerning the way we will work in this course.

Appendix 4: Learning Style Survey

Adapted from Cohen et al.'s Learning Style Survey

For each item, circle your response:

0 = Never

1 = Rarely

2 = Sometimes

3 = Often

4 = Always

Part 1: HOW I USE MY PHYSICAL SENSES

- | | |
|--|------------------|
| 1. I remember something better if I write it down. | 0 1 2 3 4 |
| 2. I take detailed notes during lectures. | 0 1 2 3 4 |
| 3. When I listen, I visualise pictures, numbers, or words in my head. | 0 1 2 3 4 |
| 4. I prefer to learn with TV or video rather than other media. | 0 1 2 3 4 |
| 5. I use colour-coding to help me as I learn. | 0 1 2 3 4 |
| 6. I need written directions for tasks. | 0 1 2 3 4 |
| 7. I have to look at people to understand what they say. | 0 1 2 3 4 |
| 8. I understand lessons better when teachers write on the board. | 0 1 2 3 4 |
| 9. Charts, diagrams, and maps help me understand what someone says. | 0 1 2 3 4 |
| 10. I remember peoples' faces but not their names. | 0 1 2 3 4 |
| | <u>A – Total</u> |
| 11. I remember things better if I discuss them with someone. | 0 1 2 3 4 |
| 12. I prefer to learn by listening to a lecture rather than reading. | 0 1 2 3 4 |
| 13. I need oral directions for a task. | 0 1 2 3 4 |
| 14. Background sound helps me think. | 0 1 2 3 4 |
| 15. I like to listen to music when I study. | 0 1 2 3 4 |
| 16. I can understand what people say even when I cannot see them. | 0 1 2 3 4 |
| 17. I remember peoples' names but not their faces. | 0 1 2 3 4 |
| 18. I easily remember jokes that I hear. | 0 1 2 3 4 |
| 19. I can identify people by their voices (e.g., on the phone). | 0 1 2 3 4 |
| 20. When I turn on the TV, I listen to the sound more than I watch the screen. | 0 1 2 3 4 |
| | <u>B – Total</u> |

21. I'd rather start to do things, rather than pay attention to directions.	0 1 2 3 4
22. I need frequent breaks when I study.	0 1 2 3 4
23. I need to eat something when I read or study.	0 1 2 3 4
24. If I have a choice between sitting and standing, I'd rather stand.	0 1 2 3 4
25. I get nervous when I sit still too long.	0 1 2 3 4
26. I think better when I move around (e.g., pacing or tapping my feet).	0 1 2 3 4
27. I play with or bite on my pens during lessons.	0 1 2 3 4
28. Manipulating objects helps me to remember what someone says.	0 1 2 3 4
29. I move my hands when I speak.	0 1 2 3 4
30. I draw lots of pictures in my notebook during lessons.	0 1 2 3 4
	<u>C – Total</u>

Part 2: HOW I EXPOSE MYSELF TO LEARNING SITUATIONS

1. I learn better when I study with others than by myself.	0 1 2 3 4
2. I meet new people easily by jumping into the conversation.	0 1 2 3 4
3. I learn better in the classroom than with a private tutor.	0 1 2 3 4
4. It is easy for me to approach strangers.	0 1 2 3 4
5. Interacting with lots of people gives me energy.	0 1 2 3 4
6. I experience things first and then try to understand them.	0 1 2 3 4
	<u>A – Total</u>

7. I am energised by the inner world (what I'm thinking inside).	0 1 2 3 4
8. I prefer individual or one-on-one games and activities.	0 1 2 3 4
9. I have a few interests, and I concentrate deeply on them.	0 1 2 3 4
10. After working in a large group, I am exhausted.	0 1 2 3 4
11. When I am in a large group, I tend to keep silent and listen.	0 1 2 3 4
12. I want to understand something well before I try it.	0 1 2 3 4
	<u>B – Total</u>

Understanding your totals

1. Once you have totalled your points, write the results in the blanks below.
2. Circle the higher number in each part (if they are close, circle both).
3. Read about your learning styles starting below.

Part 1:

- A ____ Visual
 B ____ Auditory
 C ____ Kinaesthetic

Part 2:

- A ____ Extraverted
 B ____ Introverted

Part 1: HOW I USE MY PHYSICAL SENSES

- If you prefer two or all three of these senses (i.e., your totals for the categories are within five points or so), you are likely to be flexible enough to enjoy a wide variety of activities in the language classroom.
- If you came out as more visual than auditory, you rely more on the sense of sight, and you learn best through visual means (books, video, charts, pictures).
- If you are more auditory in preference, you prefer listening and speaking activities (discussions, lectures, audio tapes, role-plays).
- If you have a kinaesthetic style preference, you benefit from doing projects, working with objects, and moving around (games, building models, conducting experiments).

Part 2: HOW I EXPOSE MYSELF TO LEARNING SITUATIONS

- If you have high scores on both parts, you are able to work effectively with others as well as by yourself.
- If you came out more extraverted, you probably enjoy a wide range of social, interactive learning tasks (games, conversations, discussions, debates, role-plays, simulations).
- If you came out more introverted, you probably like to do more independent work (studying or reading by yourself or learning with a computer) or enjoy working with one other person you know well.

Appendix 5: Brain Hemisphere Dominance and Learning

Adapted from Hannaford (2003a: 16, 109–111)

Read the following descriptions and determine which profile fits you better. Then read the hints given for your learner type.

Left, logical hemisphere

- information processing from parts to whole
- parts of language
- grammar and meanings of words
- letters, spelling
- numbers
- techniques (in sports, music, or arts)
- analysis, logic
- attention to differences
- controls feelings
- language-centred
- planned, systematic
- future-oriented
- aware of time
- structure-centred
- in stressful situations, strives even more

Hints for logical learners

- brainstorm
- draw mind maps using pictures and symbols instead of writing lists
- pay attention to your instincts and trust your intuition
- become aware of your feelings and express them
- be physically active
- learn to accept and tolerate ambiguity
- practice saying things in new ways
- speak slower and with fewer words

Right, relational hemisphere

- information processing from whole to parts
- understanding of language
- images, emotions, meaning
- rhythm, dialects
- estimates, application
- continuity, movement
- intuition
- attention to similarities
- feels freely
- prefers drawing and doing by hands
- spontaneous, flexible
- present-oriented
- less aware of time
- people-centred
- in stressful situations, is unable to reason

Hints for relational learners

- make lists
- put things in the order of importance
- pay attention to details
- practice time management
- force yourself to finish things you have started
- divide broad concepts into smaller parts
- draw pictures and mind maps to figure out links between concepts
- learn things by heart using different kinds of memorising strategies