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"Developmental sequences in Austrian lower secondary learners' acquisition of English negation"

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DECLARATION OF AUTHENTICITY

I confirm to have written this paper in English all by myself.

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1. Introduction

Second language acquisition (SLA) and language development of individuals and groups has been researched thoroughly. Second language is referred to a language that is learned after the mother tongue (Ellis 2000: 3). What is interesting about this field of research is that it offers a large variety of approaches and hypotheses that aim to explain how second language learning occurs. SLA can occur in an instructed or uninstructed environment. For language teachers, it is necessary to be aware of important studies regarding processes that learners undergo when acquiring a second language. As it is the duty of language teachers to help learners in their language acquisition, they need to understand developmental processes as well as important approaches to SLA. One relevant aspect is developmental sequences, which indicates a "fixed series of stages" in which elements of the L2 are learned (Doughty & Long 2003: 262). Several aspects of the English language, including questions, negations and third person -*s*, for example, have already been examined. The present thesis will focus on developmental sequences of only one grammatical aspect: English negation.

In order to introduce the topic of research, the first two chapters are based on a theoretical framework. A general overview of the topic of second language acquisition including, for instance, definitions and significant research by Lightbown and Spada (2013), Gass, Behney and Plonsky (2013) and Yamaguchi (2010), is provided. The significance of errors (Corder 1967, Ellis 1997) for language learning, as well as the term 'interlanguage' as delineated by Selinker (1972), are discussed. Subsequently, general studies on developmental sequences are discussed in order to provide an overview of the state of knowledge in this respect. Corder's (1967) notion of a "built-in syllabus" that determines what a learner eventually acquires is of great importance as well. Dulay and Burt's (1978) research is equally important as they conducted one of the first cross-sectional studies concerned with the order of acquisition of morphemes. Their methods of data analysis, particularly the Group Score Measure method and Syntax Acquisition Index, are fundamental for the present study. Furthermore, Krashen's (1982) Monitor Model, including his five hypotheses, are explained. Another researcher worth mentioning is Pienemann (1998) with his Processability Theory, referring to the order of language processing. Learners have a language processor that correlates with their actual developmental stage. It is necessary to include contrasting viewpoints as well. Lantolf (2005) and Lantolf and Thorne (2007) indicate that it is not possible to determine developmental sequences since language learning is dynamic. The Dynamic Systems theory (Dörnyei,

MacIntyre & Alastair 2015), which implies a non-linear form of language acquisition rather than a systematic one.

The next section is concerned with previous studies concerning the acquisition of English negation, since it is the field of interest of the present thesis. Eight studies conducted by researchers such as Butterwort and Hatch (1972), Cancino, Rosansky and Schumann (1975), Schumann (1976), Wode (1978), Adams (1978), Tarone and Swierzbin (2009), Lightbown and Spada (2013) and Ellis and Shintani (2014), are included in this specific chapter. Stages they determined are demonstrated and explained.

Subsequently, the focus is on the empirical part of this thesis. The present study seeks to determine whether there are developmental sequences in the second language acquisition of Austrian EFL learners and if they can be assigned to one or more studies that are discussed in the literature review. The instrument is a grammar test including seven tasks, with 39 items that require a negative construction. Participants are 292 lower secondary students, attending sixth, seventh and eighth grades of two schools, located in Tyrol and Vienna. In this chapter, quality criteria of tests and the process of test design, as well as formats of individual items, are outlined. Researchers such as Cancino, Rosansky and Schumann (1978) and Wode (1978) mention that second language learners of English undergo similar stages, no matter what their first languages are. The present study investigates, by means of a grammar test, whether participants of differing L1s reveal similar stages.

Data is analysed on the basis of the Group Score Measure method and Syntax Acquisition Index, as mentioned in Dulay and Burt (1978) and Developmental Sequences method. The Developmental Sequence method is established for this specific study. Based on pre-determined stages by researchers such as Cancino, Rosansky and Schumann (1975), Adams (1978) etc., different stages are established that fit the evaluation of the grammar test. Subsequently, stages are analysed for sixth, seventh and eighth grade, as well as for participants of similar language families. First, all data is analysed and depicted with the help of figures and tables. Results are subsequently analysed and correlated with literature reviewed previously.

2. The study of English Second Language Acquisition

The study of second language acquisition considers a variety of domains. It is concerned with the acquisition of a language after the mother tongue has been learned. Thus, SLA refers to the fact that the learner has already acquired at least one first language (Lightbown & Spada 2013: 36). According to Gass, Behney and Plonsky (2013: 1), it is "the study of <u>how</u> second languages are learned." SLA is interested in ascertaining why only a few learners succeed in acquiring a second language at a native-speaker level. Moreover, SLA focuses on how it is feasible for certain learners to acquire a second language while only being exposed to it to a limited extent. The knowledge of the learner's L1 can be an asset on the one hand and a hindrance on the other hand. "Cognitive maturity," as Lightbown and Spada (2013: 37) designate it, can also have an important impact on language learning, as older learners might approach an L2 differently than younger learners. These cognitive skills can again be beneficial or disadvantageous. As more than the linguistic aspect ought to be considered when studying second language acquisition, several other research fields such as psychology, sociology, pedagogy, discourse analysis etc. need to be considered as well (Gass, Behney & Plonsky 2013: 1). However, only a selection of approaches that are immediately relevant to the overall topic of the present thesis will be discussed below.

Language learners have always encountered difficulties during the acquisition of a foreign language. Much research has been done with regard to the performance of learners during the acquisition of a second language. Studies focussing on Contrastive Analysis, Error Analysis, interlanguage, accuracy order, developmental sequences, and the acquisition of certain morphemes provide valuable insight into the process which learners experience during second language acquisition (Yamaguchi 2010: 12-13).

One prominent approach is Contrastive Analysis, which was predominantly used during the 1960s and implied that errors occur due to transfer from the native language to the second language (Lightbown & Spada 2013: 41-42). Moreover, Contrastive Analysis was used to determine differences and similarities and why the acquisition of certain features of a language was more challenging than others. According to this theory, there are specific errors that frequently occur among leaners with certain first languages and are therefore, predictable to some extent (Ellis 1997: 19). In the instance of English learners of French, Contrastive Analysis would predict the following word order: "*le chien mange le*", as the SVO order is common in English. French learners of English who have both SVO and SOV constructions in their L1 but never encounter the latter while learning English, are therefore unlikely to produce a phrase

such as "*the dog it eats" (Lightbown & Spada 2013: 78-81). While some predictions owing to this approach are useful, not all errors that occur during second language acquisition can be foreseen. What is more, some errors that were anticipated by Contrastive Analysis were not relevant or occurred regardless of the learners' L1. According to Lennon (2008: 53), for instance, German L1 speakers learning English tend to use "much" and "many" incorrectly, even though there is a distinction between "*viel*" and "*viele*" in the German language.

An answer to this criticism was Error Analysis, which regarded errors as an essential feature of learning a foreign language. It considered errors as "developmental errors" and also examined the importance of transfer and overgeneralisations (Rustipa 2011: 17). At this point, it is necessary to briefly describe the difference between errors and mistakes. Errors are referred to when learners do not know what is correct, also known as gaps in knowledge. Mistakes can be accidental as learners at that specific moment are unable to perform what they would normally know (Ellis 1997: 17). A distinction needs to be drawn between global and local errors. When a global error occurs, the general word order or other basic aspects are wrong. An instance of a global error would be the sentence "Well, there's a great hurry around" (Lennon 2008: 54). These errors might make utterances confusing and difficult to comprehend. Local errors, on the other hand, only touch certain elements of a sentence and not necessarily make an utterance incomprehensible (Ellis 1997: 20). Error Analysis (EA) studies, influenced by Chomsky and elaborated by Corder (1967), have been employed thoroughly during the 1960s/70s. EA studies were considered as useful as it provided researchers and teachers insight into the current knowledge of learners. However, this approach was highly criticised as it did not offer an overall view of second language acquisition as it merely analysed errors (Yamaguchi 2010: 13).

2.1 Interlanguage

Learner language was considered as faulty and inferior to the target language until the 1960s (Lightbown & Spada 2013: 41). Selinker (1969, 1972) draws upon Corder's (1967) viewpoint on Error Analysis and claims that errors are an important aspect of language learning. Selinker (1972: 209) separated the processes of learning and teaching a second language, especially focussing on the learner's perspective. "Interlanguage" is a crucial term when the subject of learners' second language acquisition is discussed.

> "[The] set of utterances for *most* learners of a second language is not identical to the hypothesized corresponding set of utterances which would have been produced by a native speaker of the TL had he attempted to express the same meaning as the learner.

> […] [O]ne would be completely justified in hypothesizing […] the existence of a separate linguistic system [which] we will call 'interlanguage' (IL)" (Selinker 1972: 214).

According to Selinker (1969, 1972), interlanguage designates the learner's temporary linguistic stage when learning a second language. It depends on the experience of a learner with the target language. Five essential processes need to be mentioned when considering interlanguage: overgeneralisation, language transfer, training transfer, learning strategies, and communication strategies. As far as overgeneralisation is concerned, it is argued that some learners might make generalisations about certain aspects of the L2. If certain aspects of the second language are considered as easy, learners might overgeneralise them. Training transfer refers to the fact that certain features of interlanguage can be a result of transfer from aspects employed in teaching (Gitsaki 1998: 91). "Transfer-of-training" refers to the influence that textbooks, training procedures and teacher's teaching approaches have on learners' language use (Selinker 1972: 218). Furthermore, learners might potentially rely on their L1 knowledge in order to express themselves in the target language. A distinction can be drawn between negative and positive transfer, the former frequently resulting in errors and the latter facilitating learners' acquisition (Ellis 1997: 51). Learners might make use of different learning strategies to approach the target language, the omission of difficult features being one of them. Furthermore, learners can make use of certain communication strategies. The target language might be simplified or modified in order to converse with native speakers (Gitsaki 1998: 91). Moreover, learners may avoid certain topics or switch languages due to their limited proficiency level (Ellis 1997: 33-34). Selinker (1972: 215) also pointed out that certain learners might stop developing in their language acquisition, they fossilise. For this phenomenon he coined the term fossilisation.

After Selinker's (1969) introduction of the term interlanguage, Adjeman (1976) adopted it but allocated a different meaning to it. Interlanguages are, according to him, actual languages with their own grammar and are dynamic in character. Moreover, a difference must be made between the approach to language learning of individual learners and the specific elements of the target language's system. Learners might overgeneralise certain rules of the L2 and make use of items from their L1 in order to make meaningful utterances. (1976: 300-302).

Another viewpoint that is worth mentioning is Elaine Tarone's (1979, 1982) description of interlanguage. According to her, interlanguage depicts speech styles of learners that depend on different contexts. Depending on the situation and how much focus is paid on the target language's rules, learners' speech styles might vary greatly. Larsen-Freeman (2014: 203),

argued that an important aspect, namely the end of the "interlanguage continuum" needs to be considered. According to her, the equal status of success and native speaker competence needs to be questioned. Interlanguage is frequently considered as being merely a transition state that needs to be developed towards the norms of the target language. However, interlanguage, according to Larsen-Freeman (2014: 207), should be regarded as its own language, which is similar to Adjeman's (1967) viewpoint. Moreover, assuming native speaker competence is regarded as the ultimate achievement, questions regarding success and performance arise as they might be perceived differently. It is difficult to determine fixed criteria for native speaker competence that can always be applied to a target language. Language is dynamic, constantly developing and changing; therefore, it would be improper for language learners to have a fixed criterion for native-speaker-like language.

3. Studies on developmental sequences and the accuracy order of morphemes

Morpheme order studies investigate the order of acquisition of specific morphemes by first and second language learners. Berko's (1958) study was pioneering research that led to various other studies in this field (Gass, Behney & Plonsky 2013: 115). Berko (1958: 150-174) was interested in whether children would simply memorise and imitate certain language features, such as plural nouns (e.g. cat – cats), or if these endings become patterns. He considered that "[if] a child knows that the plural of *witch* is *witches*, he may simply have memorized the plural form. If, however, he tells us that the plural of *gulch* is *gulches*, we have evidence that he actually knows, albeit unconsciously, one of those rules […]" (150). Participants of his study were children attending preschool and first grade, aged four to seven. New words which he referred to as "nonsense words" were created and participants were asked to form the plural, past tense and possessive constructions for these words. Results revealed that for plural nouns, mostly an *-s* was added (e.g. **wug* – *wugs*) and for verbs *-ed* was added to indicate past tense. However, for verbs ending in *-d* or *-t* (e.g. *bod*), participants hardly ever added *-ed*, as they believed the verbs to be already in the past form. He concluded that children do not only imitate or memorise what they hear, but they fabricate rules (Berko 1958: 159-174).

Not only Berko's (1958), but also Corder's (1967) insights were fundamental for morpheme studies. In his article "The Significance of learner's errors", Corder (1967: 162) remarks that in previous works, errors were not regarded as significant for the learning process, but rather as bothersome. During that time, as far as methodology was concerned, there were two major trends or tendencies. The first tendency argued that errors would not occur if correct teaching was carried out. According to the second tendency, errors were normal and would always occur no matter what. He related these tendencies to the audiolingual method. During that time, the centre of attention was teaching. Afterwards, there was a change from a focus on teaching to a focus on learning. Interestingly, Corder (1967: 165) refers to an infant's language at an early stage, where the child might use expressions such as "This daddy apple." In first language acquisition, this utterance is not regarded as an error, but rather as an early attempt for communication. L1 learners are not expected to produce grammatically correct forms straightaway. When learning a second language, learners already possess some knowledge about the language's features, which is why errors in second language acquisition are treated differently. In L2 acquisition in educational contexts, it is predominantly the teacher or the syllabus who decides the input. However, as Corder argues (1967: 165), it is the learner or rather the learner's needs who decide what input is worth taking in. No matter what the teacher's

or institution's syllabus is, it is the learner's needs that determine what will be taken in. Here the term "built-in syllabus" is introduced when referring to this "learner-generated sequence" (166). Tarone and Swierzbin (2009: 37) also mention Corder's (1967) argument that intake and input are not the same. Even though teachers might vary the order input in the target language that is presented to learners, the intake of structures occurs mostly in a predictable and similar manner. Several grammatical structures are developed by the learner in a similar way irrespective of the syllabus of the teacher. Instruction does not necessarily influence developmental sequences. Learners cannot skip certain stages, even though instruction might aid learners in acquiring specific linguistic aspects faster (Tarone& Swierzbin 2009: 37-38). A difference is also made between random errors and "systematic errors." These random errors are later referred to as mistakes, as they can occur due to tiredness, lack of concentration etc. Errors are significant to the process of learning a language as they provide evidence of the learner's competence (Corder 1967: 167). Even though Corder (1967) aimed at providing insight into the importance of errors, his notion of the built-in syllabus would be fundamental for subsequent research.

3.1 Brown (1973)

Since the 1970's, many studies have been conducted in order to discover an order in the acquisition of morphemes. In 1973, Brown conducted a prominent study concerning the first language acquisition of three children, aiming to ascertain an order of acquisition of morphemes. In his study, he uncovered that fourteen grammatical morphemes were acquired similarly among all children (Yamaguchi 2010: 14). He divided the morpheme order into stages with which the English language development could be predicted. During the first stage, for instance, children make use of simple word sentences or phrases. Children start using *-ing* endings and -s plurals during the second stage and proceed to employ more difficult structures during the next stages (Brown 1973: 173-175). With these stages, children's L1 development from simple sentences to more complicated structures could be observed (Yamaguchi 2010: 14).

3.2 Dulay and Burt (1978)

Studies on accuracy order became also more thoroughly researched in studies of second language acquisition. One study by Dulay and Burt (1978), focused on eight English morphemes in the SLA of Spanish native speakers. In their study, they could not observe an order as Brown (1973) did; nevertheless, several elements were acquired successively. Dulay and Burt (1978: 347-368) conducted one of the first cross-sectional studies regarding natural

sequences, relying on the Bilingual Syntax Measure method. This method includes pictures that are used as stimuli in order to elicit learners' responses. For their study, the authors made use of cartoon-like pictures and 33 questions in English and Spanish that allowed them to elicit learners' responses. They solely made use of the English responses for their study. Basically, the BSM method is realised in a casual way, as the researcher talks to the child about the pictures. Since there are no incorrect answers as for the content of the pictures, participants are not constrained. Participants' responses are merely analysed in regards to their level of proficiency. Questions can be designed in such a way that specific responses cannot be avoided by learners. This allows researchers to focus on certain linguistic aspects, such as word order, verb agreement, etc. Based on Brown's (1973) research, Dulay and Burt (1978: 352-354) examined the following 11 morphemes: pronoun case (e.g. *She* likes *him*), article, singular copula, e.g., *he's*, progressive *-ing*, plural *-s*, auxiliaries, past regular, past irregular, long plurals, possessive *'s* and third person singular. Participants were children from two different L1 backgrounds, namely Chinese and Spanish. Dulay and Burt's (1978) aim was to ascertain whether children with different L1 backgrounds would have similar sequences in their acquisition.

After collecting data, Dulay and Burt (1978: 353-356) employed different scoring procedures to support their suggestion that children's learning strategies in SLA are universal. For data analysis, they developed new methods based on Brown (1973). They made use of these three methods to analyse their data: Group Score Measure method, Group Means method and the Syntax Acquisition Index (SAI). The Group Score Measure method was employed to calculate the scores of specific participant groups. Scores of selected groups were divided by points that could be reached and then multiplied by 100 in order to arrive at a whole number. The disadvantage of this method is that one utterance by children might not always be an indication of their state of acquisition. As a consequence, they employed the Group Means method as well so to minimise variability. Thus, they only included children who had more than three occurrences for a certain morpheme in their study. The scores were computed for each child separately. The Syntax Acquisition Index (SAI) was subsequently used to rank morphemes according to their level of difficulty and to determine the order of acquisition. The Group Score Measure method, as well as the Syntax Acquisition Index will be of great importance for the present study, which is why they will be described more thoroughly in chapter 5.4.

The researchers aimed at investigating whether there is an order of acquisition regardless of L1. The result was that the acquisition of the 11 morphemes was similar for both Spanish and

Chinese children. Consequently, Dulay and Burt (1978: 355-360) argue that children with different L1 backgrounds appear to have similar cognitive mechanisms. It is rather the L2 system and strategies that are universal to all learners that are decisive for the natural order of acquisition. Through these strategies, predictions about the order of acquisition of morphosyntactic elements of a second language should be possible.
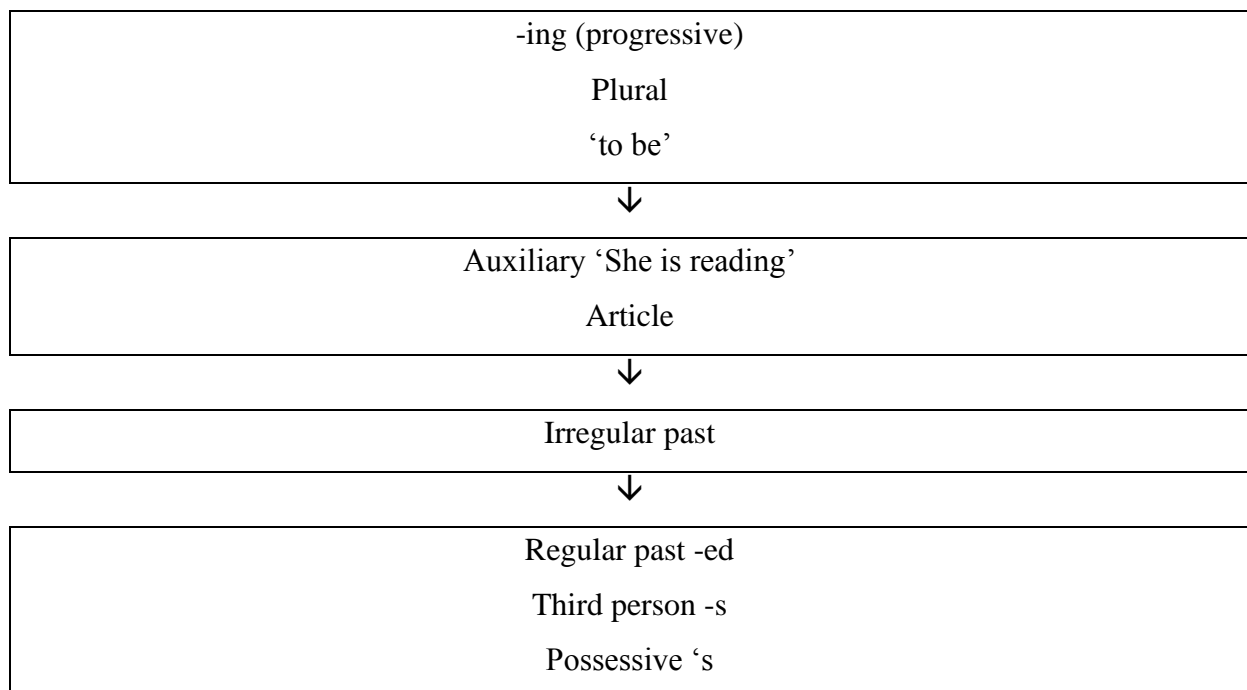
3.3 The Monitor Model (Krashen 1982)

During the 1970s, much research was done concerning the acquisition of morphemes in reaction to behaviourist viewpoints. There was a significant change in the view of second language teaching, whereby Stephen Krashen (1982) is one of the most influential theorists (Gitsaki 1998: 90). This change was noticeable as the Monitor Model, which included five important hypotheses, was developed: Acquisition-Learning Hypothesis, Input Hypothesis, Natural Order Hypothesis, Monitor Hypothesis and Affective Filter Hypothesis (Gass, Behney & Plonsky 2013: 129-134).

According to Krashen (1982: 10), in L2 learning, a distinction can be made between *acquisition* and *learning*. When referring to *acquisition,* he mentions the similarity of L2 acquisition to the process of L1 acquisition, as learning can occur subconsciously. While learners use a language, they are not considering the rules, but rather have a "feeling" of what appears to be correct. *Learning*, however, implies the knowledge of rules and grammar and the ability to consider them consciously. Whereas learning predominantly occurs in formal contexts, acquisition can happen in informal contexts as well (Krashen 1982: 10). The Natural Order Hypothesis suggests a predictable order of acquisition of certain aspects of a language (Gass, Behney & Plonsky 2013: 130). Another noteworthy hypothesis is the Monitor Hypothesis, which refers to the relationship between the acquisition and learning system. The acquired system enables the learner to produce speech spontaneously and the learned system monitors what is produced. Three functions are essential for the monitor: the learner has enough time to apply previous knowledge, the focus on form and the knowledge about the rule of the target language. These conditions imply that learners need to be consciously aware of their use of a language, especially its rules (Gass, Behney & Plonsky 2013: 130). Furthermore, Krashen (1982: 4-15), mentions that there are three types of monitor users: over-users, under-users and optimal users. While over-users excessively monitor themselves, under-users do not focus on their knowledge about the target language's rules. Optimal users monitor themselves appropriately and effectively during communication. The Input Hypothesis focuses on how languages are learned and what role input plays. According to Krashen (1985: 2), "comprehensible input," which designates an aspect of language that is slightly above the competence a learner currently has,

is decisive for acquisition. Languages are acquired when learners receive "comprehensible inputs." Moreover, he argued that learners innately possess a *Language Acquisition Device,* which is the capability to deal with the acquisition of their first and second language, enabled with the aid of "comprehensible input" (Gass, Behney & Plonsky 2013: 132). The Affective Filter Hypothesis is again related to the amount of comprehensible input as well as *Language Acquisition Device*. This hypothesis is concerned with the importance of motivation and attitude towards a language. If learners filter information, important input might not be absorbed. This filter might be the reason why certain learners succeed in attaining a higher proficiency level in a second language than others (Gass, Behney & Plonsky 2013: 133). With his Monitor Theory, Krashen sought to consider a multitude of aspects concerning second language acquisition. Even though it was popular at the time, the Monitor Theory received a critical review by many researchers as far as its suitability was concerned (Gitsaki 1998: 90-91).

For the present study, the most important hypothesis in Krashen's (1982) Monitor Model is the Natural Order Hypothesis. Krashen (1982: 13) developed an "order of acquisition of grammatical morphemes." In his text *Principles and Practice in Second Language Acquisition*, Krashen (1982: 12) referred to Brown's (1973) study that focused on children's L1 acquisition. Based on other researchers' (e.g. Bailey, Madden & Krashen 1974) studies, Krashen (1982) determined the following order of acquisition:

-ing (progressive)
Plural
'to be'

↓

Auxiliary 'She is reading'
Article

↓

Irregular past

↓

Regular past -ed
Third person -s
Possessive 's

(Krashen 1982: 13)

The morphemes in the first box have a higher accuracy among second language learners than the morphemes in the second box and so on. The concept of an order of acquisition is central

to the study of the present thesis, as an attempt will be made to determine an acquisitional order as well.

3.4 Processability Theory (Pienemann 1998)

The Processability Theory, introduced by Pienemann (1998), focuses on the stages at which grammatical aspects of a second language are "processable." Learners restructure elements of a second language in a certain order they are able to process at their current developmental stage. The "procedural skills" that are required so that learners can acquire the target language are highlighted (Pienemann 2005: 2). According to this theory, the learner possesses a sort of a linguistic processor that is responsible for the learner's comprehension and production (Gass, Behney & Plonsky 2013: 253). Moreover, Pienemann (1998: 6) mentions a hierarchy of how language is processed. A sentence, for example, has to run through a certain language processor in the learner's brain before it can be expressed. This language processor gathers the words in the learner's lexicon of the target language. Each word has certain features, such as noun, plural etc. and is stored in this lexicon. After having accessed the word in the lexicon, it has to be related and matched to the other words of the sentence so that it appears to be correct. The processor subsequently has to form phrases, noun phrases or verb phrases, for instance. In the last step, the processor can differentiate whether a phrase is the main clause or subordinate clause. Each processing stage is crucial to the next procedure, resulting in the following hierarchy: "lemma access, category procedure, phrasal procedure, S-procedure, subordinate clause procedure" (Pienemann 1998: 6-7). This hierarchy implies that learners are only able to process features of the target language (TL) that corresponds to their current developmental stage (Pienemann 1998: 6-7).

In his book *Cross-Linguistic Aspects of Processability Theory,* Pienemann (2005: 4-7) mentions four important features that are essential to the processing of language: processing elements are self-governing, developing and straightforward, and they can access grammatical structures that are already acquired (4-6). One feature proposed, namely that processing elements are self-governing, would explain the circumstance that language is quickly and automatically processed in general. Moreover, processing elements are supposed to be developing, or "incremental" according to Pienemann (2005: 4) and "linear," which means that one processor has the ability to operate with an unfinished output of a previous procedure. Pienemann (1998: 9) argues that if processability theory was considered as a "theory of grammar", it could be referred to when studying the developmental stages of the grammar of a certain second language. Nevertheless, it is important to mention that not all learners acquire a second language

in an equal manner or way. Hence, he leaves in his theory room for deviations that may occur to a certain extent, which Pienemann (1998: 9-10) termed "Hypothesis Space." This scope includes all alternative grammatical structures that learners make use of at their current developmental stage.

Pienemann's Teachability Hypothesis (1984, 1989) can also be connected to his Processability Theory, as it suggests that it is not possible to skip acquisitional stages. Teachers should, therefore, teach content that applies to the subsequent stage (Pienemann 1998: 13). What learners can acquire depends to a large extent on their readiness. They might develop their proper grammar, which can be assigned to the notion of interlanguage, before they are ready to use the correct grammar of the target language. Moreover, instructions in the classroom should conform to the order of acquisition. Grammar instruction that does not correspond with this order cannot be acquired (Pienemann 1989: 53-57).

3.5 Three stages of developmental patterns

According to Ellis (1997: 20-21), certain developmental patterns exist with language learners, consisting of three stages: "silent period," "formulaic chunks" and "simplifications". The silent period predominantly applies to children who are learning a second language as they take time listening to it before saying something. Frequently, until young learners are ready to speak, they can be silent, whereas older learners might not always have this possibility, as they inevitably need to use the target language in their everyday lives. Older learners, however, might need to speak from the beginning to fulfil everyday tasks. When acquiring a language in classroom contexts, younger learners have the advantage to be confronted with the second language through various methods (Lightbown & Spada 2013: 38). Once learners start formulating what they want to say, they might make use of formulaic chunks, or of simplifications. Formulaic chunks are expressions that belong together and can be learned as wholes, such as "I would like a…". Learners might also simplify language by avoiding certain structures or making use of simplified versions (Ellis 1997: 20-21).

3.6 Contrasting viewpoints

Several studies (e.g. Lantolf 2005, Lantolf & Thorne 2007, Watson-Gegeo 2004) have criticised theories referring to the predictability of acquisitional sequences. These studies reveal that diverse social and educational contexts lead to differences in learners' development. Studies that have challenged the developmental sequences argue that second language acquisition depends on learners' environment and is therefore not fixed (Lantolf 2005: 339). In their article

focussing on psychological mediation, more precisely the interrelationship between humans and the physical world, Lantolf and Thorne (2007: 199-203) mention the importance of regulation. During language acquisition, children formulate words according to what they perceive in their social and cultural environment. In the beginning, children's actions and formulations also highly depend on adults who look after them. Slowly, children manage to self-regulate their speech and actions. This self-regulatory development becomes apparent in a three-fold progress: The first stage, "object-regulation" refers to children's tendency to think and talk about objects that exist in their environment. In the second stage, the "other-regulation," children can also be assisted by teachers, parents, etc. to fulfil tasks. The third stage, termed "self-regulation," implies that children can regulate their activities without external help. Where the child once needed to imagine blocks for simple additions, it can now add numbers without these blocks. Self-regulation is not a fixed state and even adult native speakers will have to rely on an earlier stage in order to accomplish a difficult activity. Under certain stressful circumstances, incorrect grammar use might occur with even proficient native speakers of a language and they might have to use a dictionary, for instance (200).

Humans make use of symbolic artefacts, such as languages, to mediate and connect with others and the outside world. Language provides human beings with the possibility to refer to the past, present, future, imagined and real situations. Lantolf (2005: 72) argues that the language of tasks determines learners' tendency on which language they rely on for self-regulation. Even though speakers might be able to use a second language fluently, the language of the task influences how their cognitive activity is regulated. Lantolf and Thorne (2007: 202-204) were especially interested in the use of second languages and how humans can use them to mediate psychological activities. Lantolf and Thorne (2007: 204-206) also mentioned the "zone of proximal development". Vygotsky (1978: 86) refers to this zone as the "distance between the actual developmental level […] and the level of potential development […]." It is also believed that this zone has predictive power, as learners will be able to accomplish a task alone in the future instead of requiring help. Lantolf and Thorne (2007: 207) state that social, collaborative and communicative activities are essential to how people develop cognitively. It is possible to notice development or change in two ways. First, where learners perform an activity independently and where they perform it through mediation by others. Consequently, two learners who appear to be on the same stage of development might actually be on a different level due to their need for mediation to be able to perform an activity. It is not enough to relate development to one factor alone. Various learners overuse the regular ending -ed for past tense, for instance, "goed," "teached." These forms are normally not used in the learner's social and

linguistic setting; however, it is the learner who formulates them incorrectly (Lantolf & Thorne 2007: 209). Lantolf (2006: 718-720) therefore highlights the importance to integrate not only the cognitive process in L2 research but also the social aspect. Development relies on the interaction between people and their cultural and social environment. Cognition still occurs in the brain of a person; however, it is the social that is considered as a resource.

Lantolf and Thorne (2007: 209-210) criticise Krashen's (1982) notion of input + 1, as his language acquisition device does not offer much space for other development and it is difficult to ascertain what is "slightly" beyond the learner's actual level of development. They admit that input is necessary for second language acquisition; yet, the input is received through engagement with the social environment. It is important to differentiate between learners who acquire a language in an educational context that is organised and learners that acquire the language in an untutored context (Lantolf & Thorne 2007: 215). Lantolf's (2006: 722-724) view is a rather environmentalist one, as he mentions that second language acquisition is not universal and depends on the learning environment. The language development of learners is unpredictable because it is a dynamic process that can take various paths. He concedes that in grammar acquisition, what has been previously acquired is helpful for further development and can be referred to under certain circumstances (723-724).

Dynamic Systems Theory
What Gass, Behney and Plonsky (2013: 127) criticise with previous morpheme order studies is that variation of individual results was overshadowed by prevailing majority results. Dynamic Systems Theory was introduced to explain that language learning is non-linear. This new approach was challenging for researchers since it is hardly possible to predict anything if the language acquisition process is non-linear and dynamic. Moreover, it would be necessary to examine an entire system, rather than just small parts of it. In contrast to studies on the accuracy order, in Dynamic Systems Theory, variation is believed to be dynamic and ongoing (Dörnyei, MacIntyre & Alastair 2015: 1-2).

De Bot (2015: 29-34) is interested in the timescales of second language acquisition, more precisely, how language is acquired throughout the learner's life. Language development does not occur at only one specific point in time, but at different timescales. Time is difficult to define; in his article, de Bot (2015: 29) refers to timescales as "naturally given" and "relative." Timescales can cover decades or seconds, for instance. While some timescales (e.g. seasons, night, day) are determined by external factors, others (e.g. year, minute) are culturally

constructed. De Bot (2015: 31-34) argues that in order to understand SLA, it is sometimes necessary to look at more than one timescale, as they are often connected and overlap. However, considering all or numerous timescales simultaneously is not feasible. Therefore, it is often suggested to regard one specific timescale (e.g. an hour in the second language learner's life) along with similar ones. Although it is possible to study one or several timescales of a learner's language development (weeks or months, for instance), it is hardly feasible to look at the whole language development. So far, even though there have been several longitudinal studies on language development, no widely known research has been done on a life-long timescale of a human being related to second language acquisition. Allegedly, learning has an observable S-curve, which means that initially, there is only limited development, then there is a considerable increase, which subsequently flattens again. Learners' motivation can change throughout time as well and motivation at one timescale can differ from the motivation of others. Therefore, it is not possible to define the developmental curve of a language learner, as a great amount of measurement would be required throughout the learner's life (De Bot 2015: 33-36).

4. Studies on the acquisition of English negation

The main interest of this thesis is the sequence of acquisition of English negation. This chapter reviews a selection of studies focussing on the acquisition of English negation of second language learners in chronological order. Ellis and Shintani (2014: 65) draw attention to the difference between the order of acquisition and sequence of acquisition. Order of acquisition depicts the order in which grammar, in general, is acquired. The sequence of acquisition focuses on the sequence in which individual grammatical aspects of a second language are acquired. In previous chapters, the order of acquisition of English grammar was described, including Krashen's (1982) Natural Order Hypothesis, for instance. This chapter focuses on different research concerning the sequence of acquisition of negation. Whereas most researchers conducted a longitudinal study (e.g., Butterworth & Hatch 1972, Cancino, Rosansky & Schumann 1975, Schumann 1976, Adams 1978), only a few researchers (e.g., Dulay& Burt 1978) employed a cross-sectional study.

4.1 Butterworth and Hatch (1972)

Butterworth and Hatch (1972: 231-234) studied the second language acquisition of a Spanish speaking adolescent over a three-month period. Their study is thus widely regarded as longitudinal. The language acquisition of children and adults differ greatly as far as input and use of language are concerned. When children learn a second language, their first language is often not completely mastered, yet children frequently acquire a second language more easily as they are not as conscious about their language use as adults. Butterworth and Hatch (1972: 232) mention that after the age of eleven, learners have to be instructed. In order to acquire a second language naturally or on a native-like level, a certain age should not be exceeded. In their study, they collected data from only one subject, a thirteen-year-old Spanish speaker named Ricardo who emigrated to the U.S. in 1971. When they commenced the study, Ricardo seemed to be approachable and eager to participate in the study. His knowledge of English was quite limited when he arrived in the U.S., which is why Butterworth and Hatch (1972: 233) believed it to be interesting to observe his acquisitional development. Even though Ricardo only received little explicit instruction – mostly during two fifteen-minute speech therapies per week – he had a lot of input due to television and school. Data was collected over a three-month period, observing spontaneous speech, negation, imitation, morphology and translation. In order to elicit negation, a negation test was designed as only a few negations appeared during Ricardo's spontaneous speech. Butterwort and Hatch (1972: 239) believe that Ricardo's negative expressions could be influenced by transfer of his L1, Spanish, especially as far as

"do" is concerned. He did use expressions such as "I don't know" or "I don't care," which they believe to be learned, unanalysed expressions. Generally, he was not able to develop the auxiliary system and mostly made use of "no" and verb infinitives, such as "he no play", for instance.

4.2 Cancino, Rosansky and Schumann (1975)

Cancino, Rosansky and Schumann (1975: 422) analysed the acquisition of English auxiliaries and negations by five Spanish speakers of differing ages and economic status in a longitudinal study. Cross-sectional studies cannot concentrate on the accuracy of specific forms. With their longitudinal study, Cancino, Rosansky and Schumann (1975: 422-423) managed to analyse the acquisition of six Spanish speakers over a longer period. Predominantly, the researchers focused on English questions and negation. The acquisition was untutored, hence regarded as natural. Samples of English negation were collected by recording spontaneous utterances, elicitations and speech in varying situations such as parties. Special focus was put on the English auxiliaries as they indicate number and tense and are essential for the formulation of negation and interrogation. In their study, they concentrated on how and when the auxiliaries appeared. Moreover, they did not focus on whether the auxiliaries were employed correctly, which is why expressions such as "You is here" would be acceptable in this case (423). They observed the acquisition of English negation of the subjects in four stages:

Stage 1. *No + Verb*

 She no like baseball. I no can see.

Stage 2. *Don't + Verb*

 He don't can come.

Stage 3. *Auxiliary* is employed before negative.

 She can't go.

Stage 4. *Don't* is employed in different forms: do not, doesn't, didn't

 She didn't go.

(Cancino, Rosansky & Schumann 1975: 423)

In the first stage, the negative appears to be separated from the verb and expressions such as "I no can see" are the result. Cancino, Rosansky and Schumann (1975: 210) argue that these expressions also appear in children's first language acquisition of English negation. Moreover, there is a certain similarity to how sentences are negated in Spanish. Thereafter, in stage two, learners employed "don't" together with a verb. Utterances such "he don't can come" or "he

don't like it" as were made. In the next stage, the negative particle was placed after an auxiliary, e.g., "she can't go" or "it's not danger." In the last stage, learners utilised "don't" more correctly by stating "She didn't go" or "She doesn't laugh" (Cancino, Rosansky & Schumann 1975: 210-211). Whereas most subjects arrived at stage four sooner or later, one subject did not exceed stage one. In a later study, Schumann (1976) analysed the acquisitional process of this participant thoroughly.

In the beginning, Cancino, Rosansky and Schumann (1975: 208-211) sought to determine rules for the acquisition of English negation; however, they promptly realised that this was a difficult task due to the variation. They attempted to discover which form of negation was used when and how often, which was then captured via graphs.

Ellis (2015: 16) has analysed Cancino, Rosansky and Schumann's (1975) study with a focus on idealisation. Ellis (2015: 2-5) argues that studies focussing on developmental sequences frequently idealise observed stages of acquisition. Idealisation means that stages of acquisition are not completely rational, nor are they always backed empirically. He believes that this idealisation is not harmful and should be further pursued as it could be valuable for future research and teaching. Theories or models that make use of idealisation simplify certain aspects so that they can then be employed to other contexts and theories as well. This simplification is helpful as it allows researchers to concentrate on other issues. As idealisations are not fixed, they can be adapted or abandoned (Ellis 2015: 10-12). Various approaches to developmental sequences (Cancino, Rosansky & Schumann 1978, Pienemann 1998, Ortega 2014, etc.) are mentioned as far as idealisation is concerned. Apparently, studies focusing on the sequence of acquisition do not exceedingly idealise, as they recognise that errors are committed during the acquisition of a second language (Ellis 2015: 7).

4.3 Schumann (1976)

Subsequent to Cancino, Rosansky and Schumann's (1975) study concerning the second language acquisition of six learners, Schumann (1976) focused on Alberto, one of the six subjects, as he did not show much linguistic development. Schumann (1976: 391-392) believed that examining Alberto's development in learning English would provide useful insights. Cancino, Rosansky and Schumann (1975: 423) determined four stages in the other five subjects' acquisition of English negation. Alberto, however, did not show a similar development, as he was not able to pass stage 1. Alberto's use of English negation is overly simplified, as the negative form is merely placed before the verb and is not matched with auxiliaries. In order to

ascertain why Alberto's linguistic development is only limited, Schumann (1976: 393) focused on three aspects: ability, age and social distance to native speakers. An examination of Alberto's ability has shown that cognitively, he should have been able to acquire English more thoroughly. Furthermore, his development was also related to his age and the critical period for language acquisition. However, as other older subjects have succeeded in acquiring the second language on a higher level, age was not regarded as the reason for his limited second language acquisition. At this point, the idea that Alberto's use of language can be related to pidginization is introduced. Pidgins or pidgin languages are grammatically and lexically simplified, as they are solely a means of communication between people that do not share a common language. Considering Alberto's English as a pidgin, similarities to other pidgins become apparent. For negations, he predominantly used "no" as is common in the American Indian Pidgin English, for instance. The question arose, why Alberto showed signs of pidginization. Language is used for communicative, integrative and expressive purposes. Firstly, languages are used so that people can exchange information. Secondly, when language is used for integrative purposes, people attempt to be a member of a certain group or community. Thirdly, when language has an expressive function, the person aspires to exploit the whole variety of the target language's features. Whereas the third function is only achieved by a few people, most people master the second one. Pidgins can be related to the first function, as they are solely used to exchange information. Apparently, people who only master the communicative function are mostly restricted in their access and proximity to speakers of the target language. As far as social groups are concerned, Schumann (396-400) observed that Alberto is a Latin immigrant, belonging to the lower working class. Assimilation to the target group can be difficult for people belonging to these social classes due to socio-economic and educational reasons. In order to obtain information on Alberto's motivation in learning the target language, he had to fill out a questionnaire. Even though results of the questionnaire did not provide sufficient insight into the question why he remained at the first stage in his linguistic development, it was observed that he did not greatly attempt to get into contact with native speakers of English and remained predominantly in Latin American communities. Alberto was not instructed. Schumann (1976: 267) argued that his linguistic system was simplified because he did not receive instruction.

After Cancino, Rosansky and Schumann's (1975) ten-month study ascertaining the subjects' use of English negation, Alberto received instruction for seven months. Schumann (1976: 403-405) discovered that after instruction, Alberto managed to negate sentences more correctly in formal settings such as test situations. Strikingly, however, he realised that in spontaneous speech, Alberto remained at the first stage of English negation. Therefore, instruction alone did

not suffice. Here, a relation is drawn to children's acquisition of their first language and markedness. Seemingly, children's language becomes marked (e.g. for tense or number) once they begin communicating with more proficient native speakers. Normally, when communicating with speakers of the target language, the language of learners become marked. In the case of pidgins, however, learners do not improve, as they only use the language for simple communicative purposes.

4.4 Wode (1978)

In his paper, Wode (1978) studies learners' acquisition of English and German negation and phonological as well as syntactic features of these languages. During his research, he realised the great interest of other researchers in first language acquisition and the importance of interference in second language acquisition. As there are different types of acquisition, he believed it to be important to draw a distinction between L1 acquisition, L2 acquisition in a naturalistic manner, L2 acquisition through instruction etc. Whereas previous studies (e.g. Dulay & Burt 1974) support the belief that developmental sequences of L1 and L2 acquisition do not differ greatly, Wode (1978: 103-104) believed that children build upon what they already know; thus, they rely to a certain extent on their first language. However, it is necessary to consider the context under which they refer to their L1 knowledge. In his study, Wode (1978: 103-110) collected data in the course of his Kiel University project on language acquisition. For this longitudinal study, he collected records of four children aged three to seven. His goal was to establish a new theory concerning the different types of acquisition mentioned previously. The focus was on the naturalistic acquisition of German as first and English as a second language. The aim was to ascertain whether there would be observable sequences in learners' second language acquisition. After data had been collected, he analysed dissimilarities and similarities between the acquisition of English as an L2 and German as an L2. For learners who had German as their first language and acquired English as their L2, the following stages were discovered:

Stage 1.	*No.*
Stage 2a	*No, you.*
2.b	*No, read book. No play football.*
Stage 3.a	*That's no good.*
3.b	*She didn't see.*
3.c	*You didn't can open.*
Stage 4.a	*Don't say something.*

> 4.b   *Don't tell nobody.*

<div align="center">(Wode 1978: 111)</div>

He argues that it is not entirely clear whether 2a is related to learners' previous knowledge of German or English. 2b tends to be an overgeneralisation from 2a, yet he is unsure whether it can be attributed to English or German. In 3a, the verb precedes the negative which is common in adult German L1. In English, the negative can be found after the auxiliary. If there is no auxiliary, "do" is combined with the negative, placed before the verb, as can be observed in 3b. Yet, learners still tend to use it incorrectly when employing modal verbs, as he noticed in 3c. It is unclear whether this can be traced back to learners' knowledge of their L1 or L2. As far as negative indefinites such as *something*, *anybody* or *nobody* are concerned, he argues that they are initially combined with *don't*. Only after stage four, learners can use negative indefinites correctly. Wode (1978: 110-112) collected data from both children who have German as L1 and English as L2 and children who have English as L1 and German as L2. He believed that a theory concerning second language acquisition should have "predictive power" and be applicable to numerous languages. After conducting his study, he remarked that there are developmental sequences in naturalistic second language acquisition. Yet, he realised that the sequences are not entirely similar for both languages. As the data does not suffice to establish a satisfying theory, he aims at demonstrating how sophisticated and perplexing this phenomenon is and that learners rely on their L1 only in certain situations in their acquisition. He contradicts previous studies that argue that L1 and L2 acquisition occur similarly. In his opinion, there are solely similar principles that influence language acquisition. Wode (1978: 115-117) observed that interferences happen when learners' L1 and L2 have similar structures. Therefore, he concludes that there appear to be developmental sequences only among second language learners with similar linguistic backgrounds.

4.5 Adams (1978)

After the occurrence of numerous observational studies concerned with second language acquisition, Adams (1978: 277-280) aimed at conducting a more extensive study and considering the child's comprehension and production. Various studies that had been conducted before Adam's research employed inquiry techniques or recorded children's spontaneous speech. She argued that in spontaneous speech, children's performance would often differ greatly from their actual competence, as mistakes might occur. Moreover, she criticised previous longitudinal studies as they are time-consuming for the researcher and are often case-studies; thus not significant enough for generally valid statements. The pseudo-longitudinal

study is another approach that she briefly mentioned. This approach allows researchers to examine several children with different knowledge of the L2 at the same time. Several subjects form one group and results can, therefore, not reveal the competence of an individual. Adams (1978: 278-280) wanted to determine the stages that ten Spanish native speakers follow when acquiring English as a second language. Therefore, she combined the pseudo-longitudinal study and the single case study for her research. She believed that this approach would allow her to generalise results. In order to ascertain sequences of development, she observed individual participants and contrasted results with other participants' outcomes. The subjects aged four to eleven received instruction in an educational context and had differing L2 levels. As far as negative sentences are concerned, she observed the following sequences:

Stage 1.	*No.*	
Stage 2.	*I no wanna play. She no was here. I don't know.*	
Stage 3.a	*She don't go.*	
3.b	*She can't go.* (modals)	
3.c	*She didn't found. He doesn't likes.* (do marks tense)	
Stage 4.	*She haven't do.*	

(Adams 1978: 284-285)

At the first stage, learners uttered solely "no" when signalling negation, and it was sometimes placed randomly. Apparently, only a few subjects produced stage 1 utterances. In stage 2, "no" is placed before the main verbs, the verb *be* or modals. Formulations such as "I don't know" or "I don't care" were produced correctly in stage 2, as they are mostly memorised by learners. At the third stage, "don't" was frequently overused for all forms, e.g., "She don't know". During this period, there was increased use of modals, such as "can't" and "won't." Slowly, do was used to mark tense, although learners often double marked it, e.g., "She didn't found" or "He doesn't likes." Seemingly, after a period of two years, only a few learners managed to produce utterances that include "have+ 3rd form." Those learners who produced utterances including this structure made the following errors: "She haven't do" or "He haven't stayed" (Adams 1978: 283-285).

4.6 Tarone and Swierzbin (2009)

Tarone and Swierzbin (2009: 38-39) observed the developmental sequences of six adult second language learners in a longitudinal study. They studied when and how these learners made use of the possessive determiners *his* and *her*, English negation and questions. For this thesis, only

negations will be reported. In Tarone and Swierzbin's (2009: 38-39) data on English negation, there appear four developmental stages:

Stage 1.	*No + X*	
	No is tired	
Stage 2.	*No/Not/Don't + Verb*	
	She don't have book. We not reading.	
Stage 3.	*Aux. Neg.*	
	I can't go. She don't have job.	
Stage 4.	*Do* is marked for tense and person	
	We didn't see her. She didn't ate.	

(Tarone & Swierzbin 2009: 40)

Rules of one stage are decisive for the next stage. At the first stage, "no" is placed at the beginning of phrases in order to negate them. In stage 2, "no," "not," or "don't" is placed before a verb. In stage 3, "don't" is regarded as one single item, whereas in stage 4 it is seen as the combination of "do + not," which is why it can be employed in other tenses as well (Tarone & Swierzbin 2009: 40).

4.7 Lightbown and Spada (2013)

Lightbown and Spada (2013: 45) also focus on the question of whether there are developmental sequences in SLA. Initially, they refer to the ordinariness of developmental sequences in first language acquisition and relate them to the cognitive progress of the children. This development is different for second language learners, as they have already acquired a first language that is different from the second language to some extent. Lightbown and Spada (2013: 45) believe that some patterns are similar irrespective of learners' first language. As far as the acquisition of English negations is concerned, they rely on studies from Schumann (1979) and Wode (1978) and mention four stages that are similar to stages mentioned in previous studies.

Stage 1. *No*
Stage 2. *She don't can drive.*
Stage 3. *She is not tired. She don't understand.*
Stage 4. *She doesn't know. She doesn't seems to know.*

(Lightbown & Spada: 2013: 48)

In stage 1, the negative particle "no" precedes the verb, for instance, "No play." Stage 2 implies that "don't" is used, but not marked for tense or person, which is why expressions such as "She

don't can drive" are uttered. In stage 3, auxiliaries and modal verbs are slowly used correctly, for instance, "She is not tired" or "She don't understand." In stage 4, "don't" is used correctly with tense and person, although errors such as "She doesn't seems to know" can still occur (Lightbown & Spada 2013: 48-49).

4.8 Ellis and Shintani (2014)

Ellis and Shintani (2014: 65-66) also mention the sequence of acquisition of negation. The following sequence of acquisition is pointed out:

Stage 1.a	*No + object / adjective*	
1.b	*No + verb*	
	She no coming.	
Stage 2.	*Don't + verb* (unanalysed)	
Stage 3.	*Auxiliary + modal verbs*	
	The woman is can't	

(Ellis & Shintani 2014: 66)

They also divide learners' acquisition of negation into stages: in the earliest stage, learners' utterances are simplified, and certain grammatical features are neglected. Learners might produce utterances such as "Me no pencil" or "No good." Later, learners might include verbs that are combined with the negator "no," for instance, "She no coming." In the subsequent stage, learners make use of "don't" in order to make a negative command. Even though modal verbs are difficult for learners, they appear little by little in their utterances. Sentences such as "The woman is can't…" might be uttered at the next stage. Steadily, also auxiliary verbs are employed more accurately. According to Ellis and Shintani (2014: 66), these stages are not fixed, and overlaps might occur. When learners receive new grammatical input, they might even experience backsliding. Another interesting aspect is formulaic sequences. These are expressions or phrases that already exist together and can be distinguished between "routines" and "patterns." "Routines" are prefabricated, fixed expressions, such as "I don't know" or "I don't care," that do not need any modification. "Patterns" are pieces of a fixed expression that require the learner to fill in a word: "Can I have …," for example. Such formulaic expressions can be acquired at a rather early stage. Generally, they can be uttered rather fluently and easily and are frequently used by the target language community. Apparently, the construction "don't + verb" is a routine and a formula that can be acquired easily. It will, therefore, be interesting

to ascertain through this thesis, whether learners are able to employ "don't + verb" at an early stage already (70-71).

4.9 Overview

Cancino et al. (1975)	Wode (1978)	Adams (1978)

- longitudinal
 	
- five Spanish speakers
 	
- Stage 1: No + Verb
 	
 St.2: Don't + Verb
 	
 St.3: Aux + negative
 	
 St.4: Do + not (marked)
	- longitudinal
	
	- four German children aged
	 3- 7
	
	- Stage 1: No
	
	 St.2a: No, you
	
	  2b: No play. No + Verb
	
	 St.3a: That's no good.
	
	  Aux + no
	
	 3b: She didn't see.
	
	 3c: I didn't can open.
	
	 St.4a: Don't say something.
	
	 4b: Don't tell nobody.
		- longitudinal
		
		- ten Spanish speakers aged
		 4- 11
		
		- Stage 1: No
		
		 Stage 2: I no wanna play.
		
		 Stage 3a: She don't go.
		
		  3b: She can't go.
		
		  3c: She didn't found.
		
		  He doesn't likes.
		
		 Stage 4: She haven't job.

Tarone and Swierzbin (2009)	Ellis and Shintani (2014)
- longitudinal - six adult learners, three L1s - Stage 1: No + X (Adjective) St.2: No/ Not/ Don't + Verb St.3: Aux + Neg. St.4: Do + not (analysed)	- longitudinal - Stage 1a: No + Object/Adjective 1b: No + Verb St.2: Don't + Verb (unanalysed) St.3: Aux + modal verbs

The five studies mentioned above will be of great importance for the empirical part of the present thesis. Therefore, a brief overview was provided in order to highlight the most important aspects of the framework and results.

5. Developmental sequences in Austrian SLA of English negation

5.1 Research Question

Throughout the previous chapter, attention was drawn to different studies concerning developmental sequences in the acquisition of English negation. The present thesis seeks to ascertain how negation is acquired by Austrian English language learners. Precisely, the research question is as follows: What are Austrian lower secondary students' developmental sequences in second language acquisition of English negation?

The intention is to determine whether there are identifiable sequences and whether they are assignable to one or more theories that were discussed previously. Since the present study includes participants of sixth, seventh and eighth grades of two Austrian lower secondary schools, development might be observable. It is hypothesised that there should be observable differences between results of participants attending these three grades. Moreover, according to previously mentioned studies (Cancino, Rosansky & Schumann 1978, Wode 1978, etc.) in the beginning, second language learners pass through similar stages when learning English irrespective of their L1. Some learners might arrive earlier at a particular stage than others. While several of these studies believe the stages to be similar, the present study aims to explore whether there are divergences in the language acquisition of children with differing first languages. Therefore, it would also be interesting to ascertain whether there are observable differences and similarities between participants with different L1s. Furthermore, since the study includes schools in Vienna and Tyrol, it will be analysed whether there are differences between these two provinces.

5.2 Methodology

For language teachers, testing and assessment are two integral parts of their teaching practices. Valuable tests can assist teachers in improving their teaching methods and techniques (Abid 2012: 2). In this chapter, the instrument, test design and target population will be presented. Subsequently, the procedures concerning data collection and data analysis will be depicted, as well as problematic aspects during this process. Previous studies (e.g. Cancino, Rosansky & Schumann: 1975, Butterworth & Hatch: 1972) regarding the acquisition of English negation predominantly made use of longitudinal data collection. The present study, however, will be of cross-sectional nature, which means that over a short period of time, a considerable number of participants will take part in the study. Yamaguchi (2010: 155) claims that cross-sectional studies cannot be used in order to examine the developmental sequence. However, the present study seeks to ascertain whether it is possible to determine developmental stages drawing on a

cross-sectional study. The method employed in this research is a grammatical competency test; hence, it is necessary to consult the literature on the requirements regarding the creation of grammar tests.

Hughes (2003: 11-17) distinguishes between different kinds of test: proficiency tests, achievement tests, diagnostic tests and placement tests. Attention is drawn to proficiency tests, as they are significant for the present study. Proficiency tests can indicate a person's ability in a specific language. This kind of test does not cover the objectives of a language course, but it should measure how proficient a participant is. The criteria of what counts as proficient must be defined in advance. Furthermore, Hughes (2003: 17-19) draws a distinction between direct and indirect testing. When candidates are tested directly, they are asked to produce what is tested. Indirect testing designates that certain skills are tested in an indirect way. For instance, candidates are requested to detect errors in a text. That way, their writing ability is measured. According to Hughes (2003: 17), direct testing is more suitable than indirect testing when measuring writing or speaking skills, as it is rather clear what is being tested. Hence, the present thesis employs direct grammar testing.

According to Brown and Abeywickrama (2010: 25-29), tests should be practical, reliable and valid. A practical test is feasible in terms of the researcher's budget, time limits and access to participants. When designing a test, the researcher needs to know it should not be too long since participants might not be concentrated enough to fulfil the tasks satisfactorily. As participants usually have time constraints, it is important that the test fits into this frame. Furthermore, a test should be reliable as far as the conditions and scoring guidelines are concerned. Consistency of a measure is necessary for the test to be valid. A test should have similar results if two different administrators implement it; moreover, results should not vary greatly if the test is done on another occasion. Another aspect is "reliability of tests", as defined in Brown and Abeywickrama (2010: 28). Furthermore, the person scoring tests might be hard or easy on participants and let personal judgment interfere. In this connection, Hughes (2003: 22) distinguishes between objective and subjective testing. Objective testing is accomplished when the scorer does not make any personal judgment. Even though the present thesis seeks to employ a reliable and objective grammar test, some judgment will have to be made during scoring at a certain point. Nevertheless, the test might not be reliable as students' performance could vary due to tiredness, anxiety or other issues (Brown & Abeywickrama 2010: 28). Another important yet very difficult criterion is validity. This means that a test is well designed if it tests what it is supposed to measure (Hughes 2003: 26). In the case of the present study, the grammar test

should, therefore, only include items that measure participants' grammar skills with regard to negation.

Test design

According to Hughes (2003: 44), a test is more reliable if there is a great number of items and samples. Items should not depend on other items, but participants should have the possibility to fulfil tasks from a new beginning. Moreover, it is advisable that candidates are guided through the test without offering too much freedom. If a certain language aspect needs to be elicited, it is necessary to restrict the potential answers. Brown and Abeywickrama (2010: 158) state that "[t]here is no such thing as a test of grammar or vocabulary that does not invoke one or more of the separate skills of listening, speaking, reading or writing." This is true as the present grammar test, even though it does not require students to read a lengthy text or produce a coherent text, it still requires students' reading and writing competence. Students who have a low reading competence might therefore not be able to fulfil the tasks in a satisfactory way as they might not comprehend the sentences. Moreover, some students might not be able to spell words correctly even though they know how to pronounce them. These factors make it nearly impossible to design a valid test that focuses entirely on grammar. Nevertheless, in the present study, an attempt is made to design a test that measures participants' knowledge of grammatical structures. According to Harmer (1987: 24), there are two ways of grammar teaching: covert and overt. When grammar is taught covertly, or inductively, grammatical features are not explained explicitly, but students are asked to practice a grammatical aspect by doing certain activities. Students find out the rules themselves while or after doing certain activities. In overt grammar teaching, teachers explicitly explain the rules of certain grammar structures. After conversing with the participants' teachers that are considered in the present study, it can be concluded that all of them used a rather overt approach to grammar teaching. Most of the lower secondary schools in Austria use *More!* textbooks (Gerngross et al. 2016, 2017, 2018), which is why for this specific research, the *More! 1* and *More! 2* textbooks serve as a starting point for item development. According to Hughes (2003: 35), tests are feasible if they include tasks that participants are fairly familiar with and which are straightforward. Obviously, tasks and items have been modified and adapted to the objective of the present study. One advantage of using *More!* based items is that all vocabulary used had been learned previously. It is necessary to highlight that the sixth grade will not receive all items, as the grammar test should only measure what they have already learned during English lessons. Therefore, sixth graders will only have 24 items, whereas seventh and eighth graders have 39 items.

The grammar test of the present thesis consists of seven tasks. Tasks one and two consist of four items, task three of ten, tasks four of twelve, task six of ten items and tasks five and seven of five items.

task	number of items
one	4
two	4
three	10
four	12
five	5
six	10
seven	5

TABLE 1: ITEMS PER TASK

Tasks one, three, four, six and seven included cloze items. According to Roehr (2007: 174-190), cloze-testing is suitable if participants' language proficiency needs to be tested. Since items were based on the *More!* (Gerngross et al. 2016, 2017, 2018) textbooks, vocabulary and negative constructions that were elicited in the test had already been learned and practised. Bachman and Palmer (1996: 72) mention the importance of distractors. In this grammar test, several distractors were included so that students will have to concentrate on the correct structure and not fill in the same negative construction in thoughtlessly. In the chapter on data analysis, distractors will of course not be considered. Therefore, the grammar test consists of 39 items that will be considered in the subsequent chapters.

Tasks one, three, four and six are gap-filling tasks. In these tasks, the negative structure is deleted from the sentences and participants need to fill the gaps with the correct forms (Brown and Abeywickrama 2010: 299). In these tasks, all items are based on *More! 1* and *More! 2* exercises (Gerngross et al. 2016, 2018). While items 2, 3 and 5 require participants to fill in a negative construction, items 1 and 4 are distractors and consequently not included in the data analysis. Students are not used to tasks that solely consist of one sentence type since most tasks include both affirmative and negative sentences. As a consequence, task one consists of both sentence types. Tasks three and four also include negative constructions, as well as distractors. What these tasks have in common is that they require participants to either fill in an unanalysed don't + verb construction (e.g. "I don't play"), or a do + not + verb construction that is analysed for person and tense (e.g. he doesn't like"). Unlike the other tasks, task four is a coherent text about a girl named Samantha talking about her school uniform. A cartoon-like picture of a girl who does not appear to be content with her school uniform is depicted to make the text more appealing. Task six consists of ten items. Participants are required to fill in the correct form of the verb into the blank spaces in the past simple tense. In this task, the modal verb "couldn't"

occurs two times. There is also one instance of the be + not construction in the past simple tense. The other items are concerned with a do + not + verb construction, marked for tense.

Task two requires participants to provide a short answer. Several researchers (e.g., Dulay & Burt 1978) used the Bilingual Syntax Measure method (BSM) for their studies. As previously mentioned, this method assesses predominantly oral language proficiency. Researchers using BSM use pictures as a stimulus, eliciting participants' responses orally. For this specific study, however, pictures are used in order to elicit grammatical structures in written form. At this point, it is unpredictable whether it will be possible to elicit certain structures with an adapted and written version of the Bilingual Syntax Measure method. The instructions ask students to answer the question while considering the images. The images are taken from *Pixabay*, which is an online website containing pictures that are available free of charge and without copyright restrictions. Cartoon-like images are used, as they should convey simple emotions such as happiness or sadness. The task consists of one example and four items. The example displays how participants should carry out the task. In items 1 and 3, participants need to fill in a do + not construction that is marked for person and tense. Items 2 and 4 also require an analysed be + not construction (e.g. "We weren't").

In task five, participants are asked to rewrite the sentences, using negative constructions, so that it means exactly the opposite. This task is also based on the *More!* series (Gerngross et al. 2016, 2017, 2018). Affirmative sentences are given, and participants need to negate the sentence. For all items, the negative consists of a be + not construction in the past simple form, marked for a person. The only difficulty in this task lies in the decision whether "wasn't" or "weren't" is the suitable answer.

Task seven is a multiple-choice task that requires participants to select the correct answer out of two or three options (Brown and Abeywickrama 2010: 295). All options are similar but differ in tense or construction. Participants need to regard the gap and the given options thoroughly so that they are able to insert the correct one.

Another aspect that is added at the beginning of the grammar test is the question of participants' first language. As mentioned previously, several researchers (e.g. Cancino, Rosansky & Schumann 1978, Wode 1978,…) believe that when learning a second language, learners have similar stages, irrespective of their first language. The present study seeks to investigate whether there are observable differences. Therefore, the question of participants' L1 is included.

Participants

Participants were lower secondary students aged 11-15 from two different Austrian lower secondary schools. Whereas one school is located in Western Tyrol, the other one is located in Vienna. Overall, 292 samples of students, attending sixth, seventh and eighth grades were obtained. Participants from only two lower secondary schools were asked to fill in the grammar test as it is difficult to obtain such a large sample, and testing lower secondary students entails a bureaucratic effort. First, the principal needs to be informed and a detailed explanation of what is being planned has to be handed in at the school's board, which consists of parents, teachers and several students. If the project is permitted at this specific school, the researcher needs to distribute an information letter to the parents of every single participant and collect it. Teachers who are willing to offer twenty minutes of their English lesson for the researcher's grammar test have to receive an overview of the field of interest.

Participants were asked to fill in their first language as the present thesis aims to determine whether second language acquisition of English negation differs visibly among learners with different L1s. Students should not write their names on the grammar test to keep them anonymous (Hughes 2003: 50). The present study includes a total number of 292 participants, out of which 93 attend sixth grade, 119 seventh grade and 80 eighth grade (see figure 3). If the filter concerning first languages is applied, it becomes apparent that there is a considerable variety of L1s. The total amount of different fist languages for this study is 22. The number of participants per language is listed in the table below.

first language	number of part.	6th grade	7th grade	8th grade	first language	number of part.	6th grade	7th grade	8th grade
Albanian	**3**	1	2	0	Persian	**4**	1	2	1
Arabic	**3**	1	2	0	Philippine	**1**	0	1	0
Bosnian	**3**	1	2	0	Portuguese	**1**	0	0	1
Bulgarian	**2**	1	0	1	Punjabi	**1**	0	1	0
Chinese	**1**	0	1	0	Romanian	**3**	0	2	1
German	**197**	68	68	61	Russian	**1**	1	0	0
Greek	**1**	0	1	0	Serbian	**25**	9	10	6
Croatian	**4**	1	2	1	Spanish	**2**	1	0	1
Kurdish	**6**	0	3	3	Thai	**2**	1	1	0
Macedonian	**2**	0	1	1	Chechen	**3**	1	1	1
Pashtu	**1**	0	1	0	Turkish	**26**	7	17	2

TABLE 2: PARTICIPANTS PER L1

Pilot testing

In the second week of October 2019, one class of seventh graders from another school were asked to fill in the grammar test. The results of this pilot testing provided useful feedback of which items were successful and which items needed revision. The first task was not successful as student responses varied from "haven't played" to "didn't play." Only the instruction was offered, and no example item was provided. Since the first task required students to fill in the gaps using a present simple form of do+not, it was necessary to provide an example at the beginning. Arguably, students employed grammatical structures that they had recently learned. At the beginning of the seventh grade, students who use *More! 3* (Gerngross et al. 2017) learn or revise the present perfect tense. Therefore, it could be possible that students employed this structure by habit. This issue applies for tasks three, four and six as well. In these tasks, it is necessary to provide participants with an example. Otherwise, they might not be aware of the tense in question.

Revision of test

According to Bachman and Palmer (1996: 60-61), test design can be nonlinear, as problems might occur, and a test needs to be revised again. In the case of this grammatical competence test, there were several issues, which is why the test was slightly changed. Hughes (2003: 47) mentions that it is necessary to provide clear instructions so that participants are aware of what is expected in a task. As some students might have had difficulties understanding English instructions, the instructions were translated into German. Even though German is not the first language of all participants, they have more knowledge in this language than English. As German is used in all other subjects in these two Austrian schools, students are more advanced in this language. Furthermore, no examples were provided in the test, which is why students provided a variety of incorrect responses. It is possible that the terms past simple tense and present simple tense are too abstract for students, which is why examples are necessary.

5.3 Data Collection

Data were collected during the months of October and November 2019. As the present study is of cross-sectional nature, a total number of 292 participants filled in the grammar test over a one-and-a-half-month period. Before commencing the test, students were informed that time allotted for the grammar test was roughly twenty minutes. Moreover, they were told that they should not write their names on the grammar test and that they should fill it in individually, without any assistance. As described previously, the grammar test included seven tasks for which participants were asked to fill in the blanks with the correct form of the verb. Since

students did not write their names on the test sheets, they were numbered subsequently, so that it would be possible to return to individual tests later, if necessary.

5.4 Data Analysis

This chapter focuses on the methods of data analysis employed in the present research. The grammar test was of quantitative nature, as 292 samples of two Austrian lower secondary schools were obtained. Subsequent to data collection, tests were numbered and then entered in an MS Excel sheet.

	A	B	C	D
11	test	grade ▼	first language ▼	province ▼
12	1	2	German	Tyrol
13	2	2	German	Tyrol
14	3	2	German	Tyrol
15	4	2	German	Tyrol

FIGURE 1: FILTER FOR DATA ANALYSIS

The following rubrics (see figure 1) are allocated as filter criteria: grade, first language and provinces. It is possible to filter among grades in order to select between sixth, seventh and eighth grade. Moreover, different first languages can be selected, as well as the two provinces Tyrol and Vienna. Therefore, differences between schools located in urban and rural areas can be observed, as shown in the presentation of results. As previously described, the grammar test consists of seven tasks, out of which 39 items require a negative construction. It is necessary to mention again that the sixth grade did not receive all items, as the grammar test should only measure what they have already learned during English lessons. Therefore, sixth graders were only asked to complete five tasks, with 24 items that required negative constructions, whereas seventh and eighth graders had seven tasks, thus 39 items.

Three methods of data analysis are employed to answer the research question in a satisfactory way. The first two methods, which focus on the Group Score Measure method and Syntax Acquisition Index, are based on Dulay and Burt's (1978) cross-sectional study. These methods regard participants' utterances and allocate either zero, one or two points. The methods will provide a useful overview of the score of different participant groups, as well as a depiction of which items were most difficult to produce correctly. However, as it is not possible to answer the research question with these methods of analysis alone, the researcher designed the Developmental sequences method, a method of analysis which should display the different stages more appropriately. Therefore, previously discussed stages according to researchers such as Cancino, Rosansky and Schumann (1975), Wode (1978), Adams (1978) and Tarone and

Swierzbin (2009) are used as a starting point. The most suitable results of said researchers are used, and similar stages that fit data analysis are outlined. A more thorough description of this method will be explained in the course of this thesis.

Weighted Group Score method

Dulay and Burt's (1978: 353-358) scoring system is essential for data analysis. They introduced the Group Score Measure method, which was also briefly illustrated in chapter 3.2. As far as scoring was concerned, Dulay and Burt (1978: 353-355) decided to score "obligatory occasions." In a verbal utterance, certain function words are required. In an utterance such as "He is reading," the functor *ing* is required. Some L2 learners might simply omit it or employ the functor incorrectly. Items were scored as follows: utterances that included no function words were scored 0, learners' utterances including a function word that was incorrect were scored 1, and those with correct function words were scored 2. This scoring system was also explained in Bachman and Palmer (1996: 67). According to them, two points can be allocated to an item if the participant produces it correctly, one point if there are errors in the participant's response and zero points if it is completely incorrect or if no response is provided.

In the grammar test of this thesis, many items require the function word "do," for instance. Therefore, the following scoring system is used for data analysis:

- No function word: 0 pts.
- Function word is used incorrectly: 1 pt.
- Function word is used correctly: 2 pts.

Participants who filled in the construction not+ verb (e.g. "He not like"), where an analysed "do + not + verb" construction would have been required, for instance, receive zero points. If said participants inserted an unanalysed "do+ not+ verb" construction (e.g., "He don't like"), they receive one point, since the function word "do" was provided. Moreover, if an incorrect construction such as "He doesn't likes" was inserted, for example, the participant in question still receives only one point. Two points are allocated if the provided answer is correct. Scores for each child are then computed separately in MS Excel (figure 2).

Test	grade	first language	province	item 1 doesn't play	item 2 doesn't go	item 3 doesn't like	item 4 doesn't
1	2 Deutsch	Tirol	1	1	1	0
2	2 Deutsch	Tirol	2	2	2	2
3	2 Deutsch	Tirol	2	2	2	0
4	2 Deutsch	Tirol	2	2	2	2
5	2 Deutsch	Tirol	2	2	2	0
6	2 Deutsch	Tirol	2	2	2	0

FIGURE 2: EXAMPLE OF SCORING METHOD

For the Group Score Measure method, Dulay and Burt (1978: 354-356) decided to allocate one score to one specific group (e.g. Chinese L1 speakers) for each item. They developed a formula that could be depicted as follows:

$$Group\ Score = \frac{Raw\ Score}{Occasion} \times 100$$

EQUATION 1: GROUP SCORE AS DESCRIBED IN DULAY AND BURT (1978)

"Raw Score" is the sum of the scores of children's utterances and "Occasion" is the occurrence of certain morphemes. This is then multiplied by 100 in order to arrive at a whole number that can then enter the statistics. That way, it is possible to allocate one score to one specific group.

For this thesis, the group score, according to Dulay and Burt (1978) and Bachman and Palmer (1996), was adapted. The group score shows the average achieved points in a specific scoring system of selected groups without considering the number of participants per group. However, if the group score is computed that way, the same weighting is applied to all selected participant groups although there might not be a balanced number of pupils per group. If their results are weighted, it is possible to determine the correct group score for different groups of participants. The following formula is applied for the weighted group score (a description of variables is listed below):

$$GS_W = \frac{(N_1 \times AS_1) + (N_2 \times AS_2) + (N_3 \times AS_3)}{N_S}$$

EQUATION 2: WEIGHTED GROUP SCORE

- GS_w : Weighted Group Score
- N_1: sixth graders, N_2: seventh graders, N_3: eighth graders
- AS_1: achieved score of N_1 (sixth graders)
- AS_2: achieved score of N_2 (seventh graders)
- AS_3: achieved score of N_3 (eighth graders)
- N_s: sum of all students

Acquisition Index

This chapter is concerned with the items of the study's grammar test. Dulay and Burt (1978: 353) employed the Syntax Acquisition Index, as was mentioned in chapter 3.2, to ascertain an order to the items that were easier or more difficult to acquire. In Dulay and Burt's (1978: 353) study, point values were assigned to children's utterances. The following formula could depict their approach to the Syntax Acquisition Index (SAI):

$$Syntax\ Acquisition\ Index = \frac{Sum\ of\ Child\ Response\ Value}{Sum\ of\ Grammatical\ Form\ Value} \times 100$$

<div align="center">EQUATION 3: SAI AS DESCRIBED IN DULAY AND BURT (1978)</div>

The Syntax Acquisition Index allows an overview of which morphemes were acquired most easily or which were most difficult (Dulay & Burt 1978: 353-354). The goal is to deduce, by means of the SAI, which items proved to be challenging for participants of this study and which ones appeared to be easier.

Developmental Sequences method

The weighted group scores provide an overview of scores for different participant groups. The acquisition index permits an overview of the items that appear to be most difficult to fill in correctly. Even though these methods provide valuable insights, it is not possible to answer the research question in a satisfactory manner. The group score method was used by Dulay and Burt (1978) and is therefore not completely new. However, neither this method, nor the acquisition index allow an observation of certain developmental stages. For that reason, this thesis will include another method for data analysis that was developed for the specific purpose of determining developmental sequences. In chapter 4, studies by different researchers (e.g. Cancino et. al 1975, Wode 1978, etc.) provided useful insight into the subject of developmental stages in the acquisition of English negation. Page 29 provided an overview of the stages summarised by the following researchers: Cancino, Rosansky and Schumann 1975, Wode 1978, Adams 1978, Tarone & Swierzbin 2009 and Ellis & Shintani 2014. For the subsequent method of data analysis, the stages determined by these researchers are used as a basis and adapted for the purpose of this study. For this specific thesis, the following stages are established:

Stage 1:	No/ Not + verb
Stage 2:	Don't + verb (Do is unmarked)
Stage 3:	Modal verbs (incorrectly), Wrong auxiliary is used
Stage 4:	Do is marked for tense and person (incorrectly)
Stage 5:	Do is marked for tense and person (correctly)

Stage 1 constitutes a structure that includes "not + verb". Constructions such as "I no go" and "She not went" are employed by students at this stage. At stage 2, "don't + verb" is employed, which is neither marked for person nor tense. Modal verbs make their first appearance at stage

3; yet, they are still used incorrectly at this stage. Students who use the wrong auxiliary would be at this stage. Constructions such as "She couldn't went" or "She isn't go" could appear. Furthermore, at stage 4, "do + not + verb" is marked for tense and person, yet still incorrect. Phrases such as "She doesn't seems" or "He didn't went" would account for this stage. The last one, stage 5, is reached once modal verbs, auxiliaries and do + not is employed correctly. Even though most previous studies portrayed four stages, for this thesis the last stage, at which participants produce the correct construction, is designated as 5. It would have also been possible to divide stage 4 into 4a and 4b, where stage 4b would equal the present stage 5. However, it is easier to calculate numbers without letters, which is why the decision was made to introduce five stages instead of four. For this method a new MS Excel sheet, similar to the first MS Excel sheet, was created to fill in the stages 1-5 that were described previously. The number 0 was filled in if no negative construction was produced. As far as design and structure of the new Excel sheet is concerned, there are various similarities. For instance, the same number of samples was included, namely, 292. Moreover, it is possible to apply the following filter criteria: grades, first languages and provinces. As already mentioned, the grammar test included a total of seven tasks out of which 24 items were relevant for sixth graders and 39 items for seventh and eighth graders. In the first Excel sheet, the numbers zero, one and two were filled in based on the Group Score Measure method by Dulay and Burt (1978). Due to time constraints, this method, which will be referred to as "Developmental Sequences method", will only include three out of the seven tasks. Tasks one, four and six, which result in 20 items, are analysed. Items are listed separately again, but this time numbers $0 - 5$ are filled in to indicate the stages. sixth graders only received 10 of these items, since the other ones use modal verbs and past forms. Seventh and eighth graders received all 20 items, which is why it might be more convenient to compare these two grades. This method might allow a clearer distinction between the stages. According to the Group Score method, participants' constructions such as "She don't like" and "She doesn't seems" would have both received only 1 point. However, as they are assignable to two different stages – in this case, stage 2 and stage 4– results might be more informative as far as developmental stages are concerned.

5.5 The Bilingual Syntax Measure task

Items 4, 5, 6 and 7 made use of the Bilingual Syntax Measure method. Unfortunately, this task was not successful enough to be considered for the data analysis part alongside other item groups. Dulay and Burt (1978) employed this method for data collection by using pictures as stimuli for an oral response. An attempt was made to employ this method in the form of a written grammar test. The task consisted of an example sentence and four items. The example

sentence was as follows: "Is the man crying? No, he isn't". While items 4 and 6 required a "do + not marked (present)" construction, participants had to fill in "be + not (present)" for items 5 and 7. Item 4 and 6 proved to be challenging, as 46.75 percent for the first and 50.86 percent for the latter was achieved. Item 4 required the following solution: "No it doesn't". However, as the item was faulty, most students did not fill in this construction. The problem with this item was that the question "Does the cat watch TV?" was posed as "Is the cat watching TV?" instead. This should clearly have been a present continuous construction, as an action was described. Conversely, participants attained 93.84 percent for item 5 and 77.23 percent for item 7. This could have been easier due to the fact that an example sentence with the exact same structure was provided. Since no satisfactory results regarding developmental sequences can be obtained from this task, it will not be included in the data analysis.

6. Presentation of results

6.1 Weighted Group Scores

This part is dedicated to weighted group scores of different groups of participants. Scores are calculated by means of the formula (see equation 2) that was explained above. As this chapter merely focuses on the presentation of results, striking outcomes or development will not be interpreted and discussed immediately. A whole chapter will be dedicated to the discussion and interpretation of results.

Since it is interesting to consider achieved points not only for individual students but for each grade, columns regarding these aspects were integrated. As shown in figure 3 below, no filter was applied, which is why all points and percentages are visible. The group score of each grade is visible in column N. Sixth graders had 24 items, which means that for each item they could achieve a maximum of two points (48 points). As there are 93 participants attending a sixth grade, a total number of 4464 points could have been achieved. All sixth graders, irrespective of their L1 or province, achieved 3329 points, which means 72.33 percent. However, when considering the group score of seventh graders, it needs to be considered that they completed two more tasks, which means that they had 39 items (= 78 points) instead of only 24. The table indicates that the seventh graders achieved 6603 out of 9282 points, which equals 71.14 percent. Furthermore, eighth graders were able to achieve 4533 out of 6240 possible points, thus 72.64 percent. In these columns, the group scores are split for each separate grade.

E	F	G	H	I	J	K	L	M	N
6th grade	93		achieved pts 6th grade	3229	of	4464		pct [%] 6th grade	72.33
7th grade	119		achieved pts 7th grade	6603	of	9282		pct [%] 7th grade	71.14
8th grade	80		achieved pts 8th grade	4533	of	6240		pct [%] 8th grade	72.64
Total:	292								

FIGURE 3: DISTRIBUTION OF ACHIEVED POINTS/ % PER GRADE

As already mentioned, no filter was applied in the figure above. As the percentages do not differ greatly, it would be interesting to examine the weighted group score of different L1 speakers from different provinces. In order to better illustrate the difference between the group score and weighted group score, it is explained with the aid of an example (see figure 4 on the next page). For instance, the researcher is interested in the group score of Viennese Turkish L1 speakers of sixth and seventh grade.

		6th grade	3		achieved pts 6th grade	59	of	144		pct [%] 6th grade	40.97
		7th grade	17		achieved pts 7th grade	912	of	1326		pct [%] 7th grade	68.78
		8th grade	0		achieved pts 8th grade	0	of	0		pct [%] 8th grade	0.00
		Total:	20								

GROUP SCORE (per class):	54.875	%
WEIGHTED GROUP SCORE:	64.607	%

first language	province	item 1 doesn't play	item 2 doesn't	item 3 doesn't like	item 4 doesn't	item 5 isn't	item 6 d	item 7 are	item 8 doesn't like	item 9 don't play	item 10 doesn'
Türkisch	Wien	0	0	0	2	2	2	0	0	0	0
Türkisch	Wien	1	1	1	0	2	0	2	1	2	1
Türkisch	Wien	0	0	0	0	1	1	1	0	0	0
Türkisch	Wien	2	2	2	2	2	0	0	0	1	2

FIGURE 4: GROUP SCORE OF VIENNESE TURKISH L1 SPEAKERS

The group score of each grade is illustrated individually on top in column N. Viennese Turkish L1 speakers attending sixth grade achieved 59 out of 144 possible points, which means they achieved 40.97 percent. Seventh graders, however, achieved 912 out of 1326 points (68.78 percent). Since no Viennese Turkish L1 speakers attending eighth grade are selected, the group score for these participants is zero. The group score of all selected participants, which is highlighted in blue, as can be seen in figure 4, is 54.88 percent. As already explained, the group score is computed by taking the percentage of sixth and seventh graders and calculating the average value. However, as is observable in this specific example, it is not entirely correct to compute the group score that way. Sixth graders achieved 40.97 percent, whereas seventh graders achieved 68.78 percent. If the group score is computed that way, the same weighting is applied to sixth graders as to seventh graders although there is not a balanced number of pupils in both grades. Since there are only three sixth graders and 17 seventh graders, their results need to be weighted. Therefore, the excel sheet contains an excel-cell that is dedicated to the weighted group score. The weighted group score was also shown in equation 2, below the group score. As a result, the weighted group score of Viennese Turkish L1 speakers attending sixth and seventh grade is 64.61 percent. In the following part, if more than two grades are combined, only the weighted group score will be considered.

One interesting aspect of this study is the variety of different first languages among participants. As already mentioned, there are 22 different L1s. As a first step, it would be interesting to apply the filter regarding first languages and determine participants' weighted group score. As some languages only have one to six participants, which is a rather small number compared to the 197 German L1 speakers, the researcher decided to combine languages that belong to a similar language family. The following languages or language families will be analysed: Turkish, German, Indo Iranian languages, Romance languages and Slavic languages. While Indo Iranian languages include Pashtu, Persian and Kurdish, Romance languages that occur in the study are Spanish, Portuguese and Romanian. Slavic languages that occur among this study's participants

are Russian, Bosnian, Serbian, Croatian, Macedonian and Bulgarian. There are eight other languages that only have one to six participants but cannot be categorised to a suitable language family. These languages are Albanian, Arabic, Chechen, Chinese, Greek, Philippine, Punjabi and Thai. Even if languages such as Chinese, Philippine and Thai were categorised as "Asian languages," it would not be possible to obtain a number of participants that is large enough to compare to other language families. Therefore, the researcher decided to combine participants of these eight languages that could not be easily be assigned to one language family and categorise them as "other languages" in the bar chart below (see figure 5).
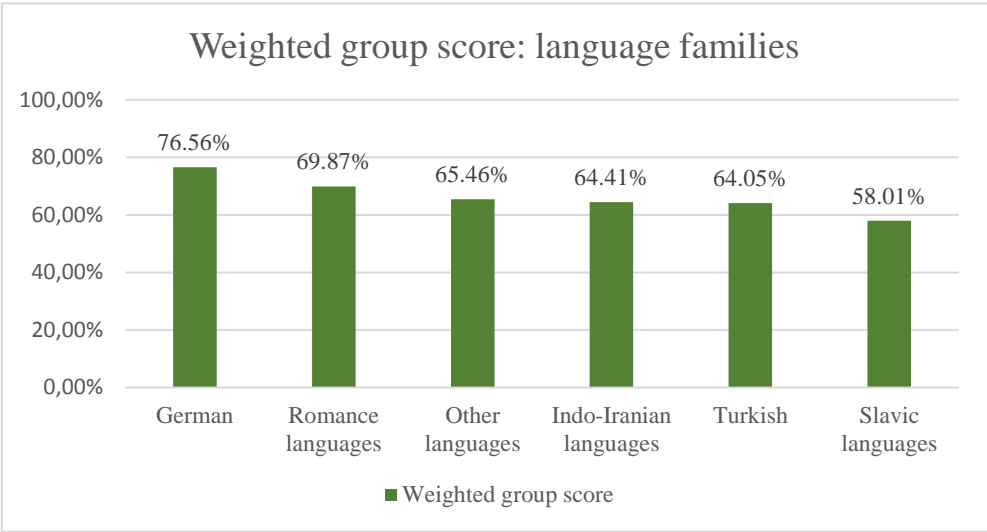
FIGURE 5: WEIGHTED GROUP SCORE: LANGUAGE FAMILIES

The vertical axis represents the percentages achieved by participant groups. The percentages calculated by employing the weighted group score are represented in the bar chart. The chart provides information on the scores of six different participant groups. The maximum weighted group score reached by all language families is 76.56 percent, the lowest is 58.01 percent. This results in a range of 18.55 percent. The present study included a relatively high number of participants whose first language is German. A weighted group score of 76.56 percent was achieved by German native speakers as can be seen in the first bar in the chart. The bar chart indicates that this is the best score of all language families. The second-best result, with a score of 69.87 percent, achieved participants of Romance languages, such as Spanish, Portuguese and Romanian. Moreover, a score of 65.46 percent was attained by participants whose first languages were categorised as "other languages." According to the bar chart, a score of 64.41 percent was achieved by participants that can be associated with the Indo-Iranian language family. The chart also indicates that 64.05 percent was achieved by Turkish participants,

irrespective of grade or school. The lowest weighted group score was achieved by participant of Slavic languages, at 58.01 percent.

The bar chart above highlighted the total weighted group scores of language families from both Tyrol and Vienna. It would be interesting to ascertain the weighted group scores of each province. In the bar chart below, the weighted group score for participants of both provinces, Vienna and Tyrol, are illustrated. Whereas the bar in the middle of each language family depicts the weighted group score of Vienna, the right bar points to the weighted group score of participants of Tyrol.
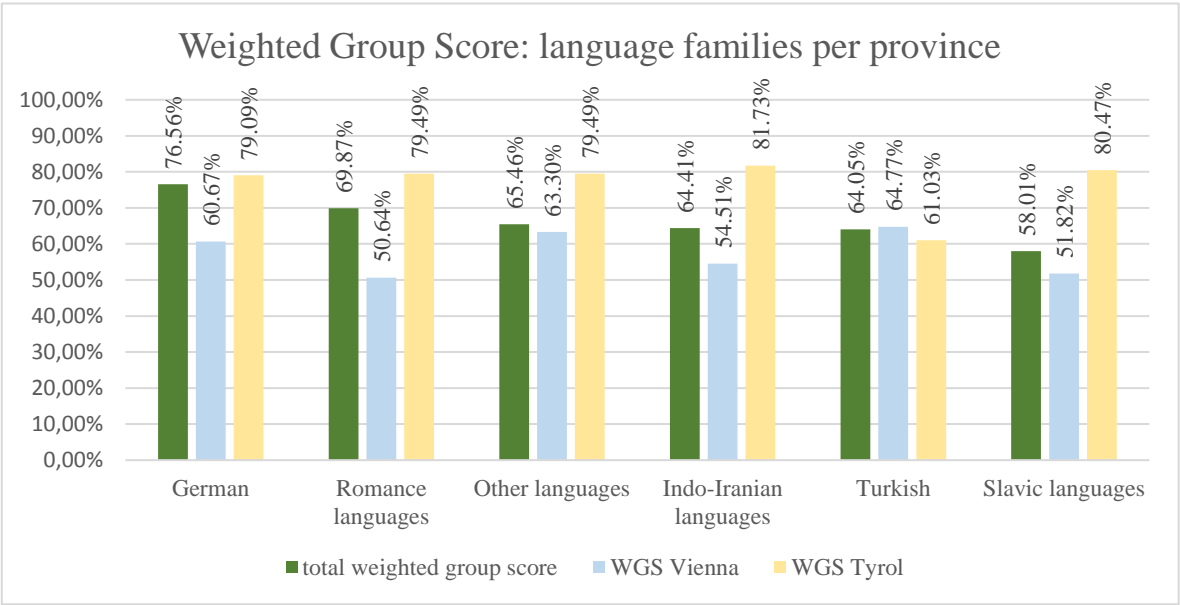
FIGURE 6: WEIGHTED GROUP SCORE: LANGUAGE FAMILIES PER PROVINCE

The bar chart indicates the different weighted group scores of language families per province. The order of language family is maintained to highlight specific features and compare them with the previously explained chart. Since the highest total weighted group score was achieved by German native speakers, they are illustrated on the left side of the chart again. However, if this language family is considered individually per province, it can be observed that there are differences. Whereas Viennese L1 speakers of German achieved a group score of 60.67 percent, German L1 speakers from Tyrol achieved 79.09 percent. Since there are 170 participants from Tyrol and only 27 from Vienna, this aspect is considered in the total score and more weight is assigned to Tyrolean than to Viennese German L1 speakers.

As far as Romance languages are concerned, it can be argued that there is a difference between Viennese and Tyrolean L1 speakers. A score of 50.46 percent was achieved by Viennese

participants, while Tyrolean scored 79.49 percent. According to the statistics, the divergence between Viennese and Tyrolean participants is the highest for all language families, at a range of 29.03 percent. The score of Romance language speakers from Tyrol is slightly higher than the one of Tyrolean German native speakers. However, as the group score of Viennese Romance L1 speakers is lower than those of Viennese German L1 speakers, the overall weighted group score of German participants is higher.

Participants of "other languages" including Albanian, Arabic, Chechen, Chinese, Greek, Philippine, Punjabi and Thai achieved the third-highest total weighted group score. In Vienna, 63.30 percent was achieved by this language group, which results in a higher group score than German or Romance L1 speakers. In Tyrol, 79.49 percent was achieved by this language group, which is equal to the weighted group score of the Romance language group.

An overall score of 64.41 percent was achieved by Indo-Iranian languages. Whereas they achieved a relatively low group score in Vienna with 54.51 percent, in Tyrol, this language family had 81.73 percent, which is the highest group score of all language families. The figure reveals a divergence of 27.22 percent. Since more participants of this language family are represented in Vienna than in Tyrol, the total weighted group score of both provinces combined is closer to the score of Viennese participants.

Turkish is the only language family that achieved a better group score in Vienna than in Tyrol. With a score of 64.77 percent, the Viennese score is higher than Tyrol's score of 61.03 percent. The range between the weighted group scores is 3.74 percent. Since there are more Viennese participants whose first language is Turkish, the total weighted group score of 64.05 percent is closer to the Viennese score.

Slavic languages achieved 58.01 percent, which is the lowest overall group score. In Vienna, this language group scored 51.82 percent, while participants achieved 80.47 percent in Tyrol. The range between Viennese and Tyrolean participants of Slavic languages is 28.65 percent, which can be deducted from the figure. It is important to mention that the individual group scores for Slavic L1 speakers in Vienna and Tyrol were higher than the group scores of Romance L1 speakers for each province. However, as there are more Slavic L1 speakers in Vienna than in Tyrol, the total weighted group score considers how many participants there are per province.

As mentioned, filters can be applied to grades as well. The bar chart below (figure 7) indicates the weighted group score per province and grade. Overall, the study includes 93 sixth, 119 seventh and 80 eighth graders. In Vienna, there were 99 participants, out of which 25 attended sixth, 53 seventh and 21 eighth grade. In Tyrol, 193 students filled in the grammar test. 68 sixth, 66 seventh and 59 eighth graders took part in this study. More than twice as many Tyrolean students participated in this study, which is why the weighted group scores may be closer to the results of Tyrolean participants than those of Viennese.
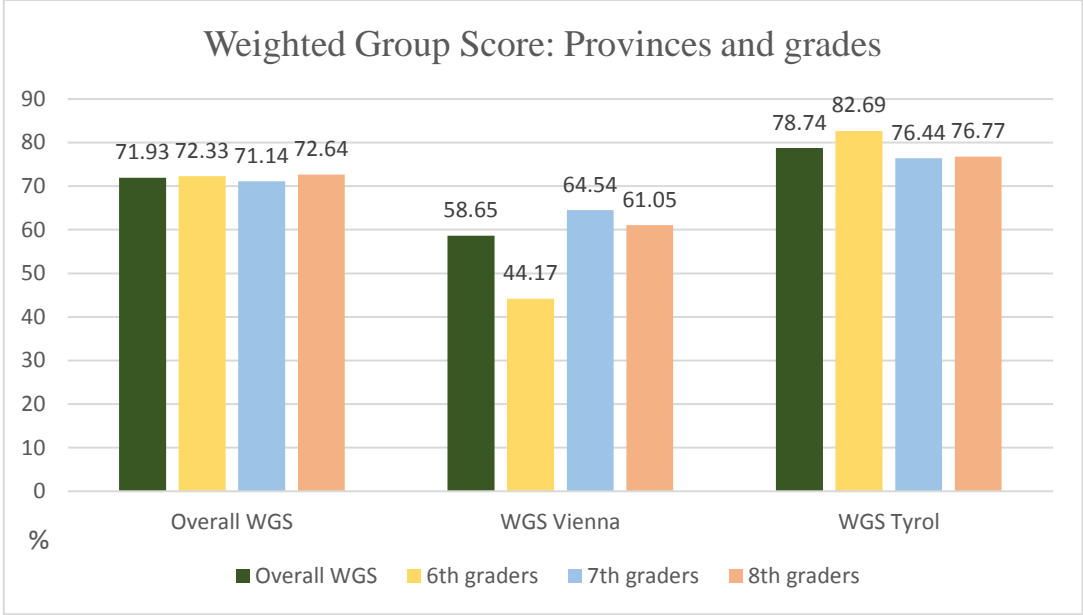

FIGURE 7: WEIGHTED GROUP SCORE: PROVINCES AND GRADES

A weighted group score of 71.93 percent was achieved by all participants, irrespective of their grade or province. A comparison of the scores of the weighted group score of Viennese participants (58.65 percent) and Tyrolean participants (78.74 percent) displays that there are differences between the scores of sixth, seventh and eighth graders. From the figure, it can be ascertained that there is a minimal decrease from sixth graders to seventh graders. While 72.33 percent was achieved by sixth graders, a slightly lower score (71.14 percent) can be observed with seventh graders that accounts for 1.19 percent. A slight increase from seventh graders to eighth graders can be observed. 72.64 percent, which is the highest score for all three grades, was reached by eighth graders.

In the Viennese school, a weighted group score of 44.17 percent was attained by sixth graders. The numbers reveal that this is the lowest score achieved by all three grades, irrespective of the province. The chart illustrates that 64.54 percent was reached by seventh graders, which is a

considerable increase in the range of 20.37 percent. According to the statistics, a decrease to 61.05 percent can be observed with the eighth graders of Vienna. A comparison of the scores of the sixth graders of Vienna and Tyrol display a noticeable divergence in weighted group scores. While 44.17 percent was achieved by Viennese sixth graders, 82.69 percent can be attributed to Tyrolean participants, which constitutes a range of 38.52 percent. Tyrolean seventh graders achieved 76.44 percent, which is a decrease of 6.25 percent when compared to the high percentage of sixth graders. At 76.77 percent, a minimal increase was attained by eighth graders. Even though these figures provide a useful overview of weighted group scores of different language families and grades, no developmental stages can be observed from the aggregated scores. Therefore, the next chapter will be dedicated to specific items and how difficult they were to acquire.

6.2 Acquisition Index

This section is concerned with facility values of specific items in order to demonstrate which items appeared to be difficult or easy for participant groups (Dulay & Burt 1978: 353-358). The table below indicates the facility value of each item, which means that the percentage demonstrates the difficulty or easiness of the item. No filter was applied for this table, so it draws attention to the percentages achieved by the participants irrespective of their grade, first language or province.

Item	Facility Value	Item	Facility Value	Item	Facility Value
1	64.55%	14	77.23%	27	70.35%
2	66.61%	15	62.84%	28	70.10%
3	68.32%	16	76.71%	29	58.54%
4	46.75%	17	78.42%	30	67.84%
5	93.84%	18	73.97%	31	67.34%
6	50.86%	19	64.90%	32	69.35%
7	77.23%	20	90.58%	33	63.82%
8	68.66%	21	89.55%	34	68.34%
9	76.54%	22	91.44%	35	93.97%
10	69.86%	23	89.04%	36	40.20%
11	74.83%	24	89.73%	37	46.73%
12	72.95%	25	60.80%	38	82.41%
13	78.08%	26	70.60%	39	42.24%

TABLE 3: OVERVIEW FACILITY VALUE

Task one included three items that required the answers "doesn't play", "doesn't go" and "doesn't like". All the participants achieved a combined percentage of 64.55 percent for the first, 66.61 percent for the second and 68.32 percent for the third item. The subsequent items 4,

5, 6 and 7 can be associated with the Bilingual Syntax Measure method that previous researchers (e.g. Dulay & Burt 1978) employed in their studies. Normally, the Bilingual Syntax Measure method is employed orally; however, for this specific grammar test, an attempt was made to use it in a written setting. As the numbers reveal, the achievement for these items was disparate. While items 4 and 6 reveal a low percentage at 46.75 percent and 50.86 percent, items 5 and 7 proved to be easier, as 93.84 percent and 77.23 percent was attained. In task three, items 8 and 10 required the constructions "doesn't like" and doesn't speak". Items 9, 11 and 12, however, required the simple "do + not + verb" construction. A total of 68.66 percent and 69.86 percent was reached for these items, whereas 76.54 percent, 74.83 percent and 72.95 percent was achieved for the other ones. According to the statistics, items 8 and 10 proved to be the most difficult items in the third task. Task four was concerned with a coherent text, requiring marked and unmarked constructions of "do + not" in the present perfect tense. Items 13, 14, 16, 17 and 18 required a simple "do + not" construction, more precisely, the answers "don't like" twice, "don't think", "don't wear and "don't have". Interestingly, the percentages that participants achieved for these items were mostly well over 70 percent. However, in items 15 and 19 that required participants to fill in "doesn't look" and "doesn't like", 62.84 percent and 64.90 percent was achieved. The numbers reveal that items of task five, consisting of be + not constructions in the past simple tense, were by far the easiest to answer correctly. Nearly all the items have a success rate of around 90 percent. In task six, items 25 and 29, which required the modal verb "could" received the lowest percentages throughout the whole task, at 60.80 percent and 58.54 percent. Items 26, 27, 28, 30, 31 and 34 required the construction "do + not" in the past simple tense (e.g. "didn't work") and were all attained by participants at over 67 percent. Item 33 that required "didn't have", however, can be perceived as more difficult, as students only achieved 63.82 percent. Interestingly, the construction "be + not" in the past simple tense proved to be approximately as difficult as the items requiring "do + not" (past), as participants achieved 69.35 percent. The results of task seven differed greatly. Items 35 and 38 appeared to be easy, as participants achieved 93.97 percent and 82.41 percent, whereas items 36, 37 and 39 proved to be challenging, since students' percentages were far below 50 percent. The numbers reveal that the multiple-choice section includes the easiest and the three most difficult items. Overall, the easiest item in the whole grammar test was item 35, whereas the most difficult one was item 36. Items that can be associated with the attempt to establish a BSM task also reveal that item 5 was easy, whereas items 4 and 6 were quite challenging.

Item groups

The section above indicated the facility values of items for all participants. It would be interesting to ascertain the easiest and most difficult items for separate participant groups. Since the study includes 39 items, it is difficult to illustrate them in a clear representation for specific groups. In order to be able to illustrate the facility values more conveniently, items were combined into item groups. The first item group referred to as "do + not unmarked" indicates the simplest construction of do + not since it does not have to be changed. Solutions such as "don't like" or "don't wear" were required from students. Furthermore, there are two different item groups that are concerned with a marked construction of "do + not". One group required students to fill in this construction in the present simple tense, while the other one demanded a past simple structure. Items 1, 2 ,3, 8, 10, 15 and 19 can be referred to as the item group "do + not marked (present)", as students should have filled in constructions such as "doesn't like" or "doesn't go". The other item group, including items 26, 27, 28, 30, 31, 33 and 34, is titled "do + not marked (past)", which would elicit structures such as "didn't know", for instance. Items 20, 21, 22, 23, 24 and 32 can be associated with the item group "be + not (past)". These items required answers such as "wasn't". Another item group that only includes two items (25 and 29) is referred to as "modal verb + not". The last item group, which is treated separately since the format of the task is different from the other formats, is titled "multiple-choice". This task was different from the other tasks in that students did not have to produce the correct answer but choose between two or three options. Items 4, 5, 6 and 7 are an attempt at a written Bilingual Syntax Measure task. Since this task was not quite successful, the corresponding items will not be included in the calculation of the item groups. In the following section, specific participant groups were filtered in the MS Excel sheet to ascertain the facility values of the following item groups: "do + not unmarked", "do + not marked (present)", "do + not marked (past)", "be + not (past)", "modal verb + not", "multiple-choice".

Figure 8 on the next page indicates which item groups were most difficult and which item groups were the easiest. For participants of all grades in Vienna and Tyrol, the most difficult items were those with the modal verb, at a percentage of only 59.67 percent. Items including a "be + not (past)" construction are part of the easiest item group, at 86.61 percent.
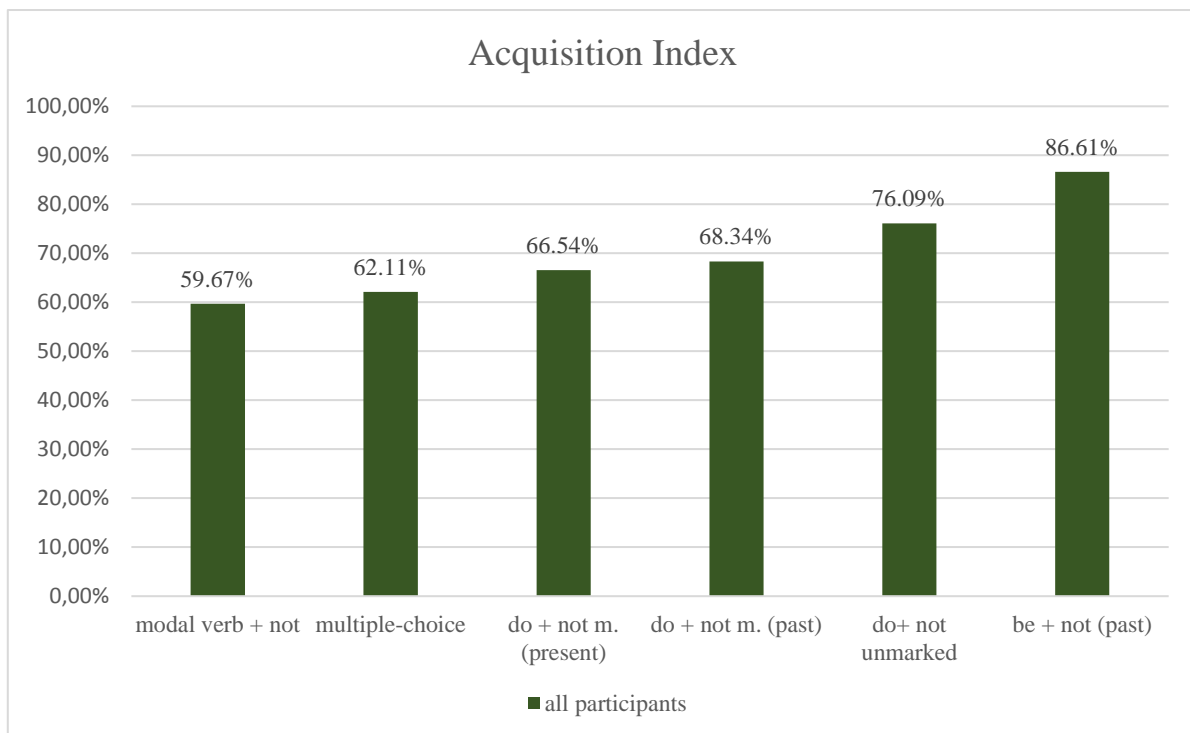
FIGURE 8: ACQUISITION INDEX : ALL PARTICIPANTS

The subsequent figure (see figure 9 on the next page) draws attention to the facility values of these item groups for language families that were also focused on previously. First, the most difficult and easiest item group for German L1 speakers will be ascertained. Subsequently, participants of the Romance language family will be examined. The easiest and most difficult item group will also be determined for the languages referred to as "other languages". Furthermore, Indo-Iranian, Slavic languages and Turkish will be considered.
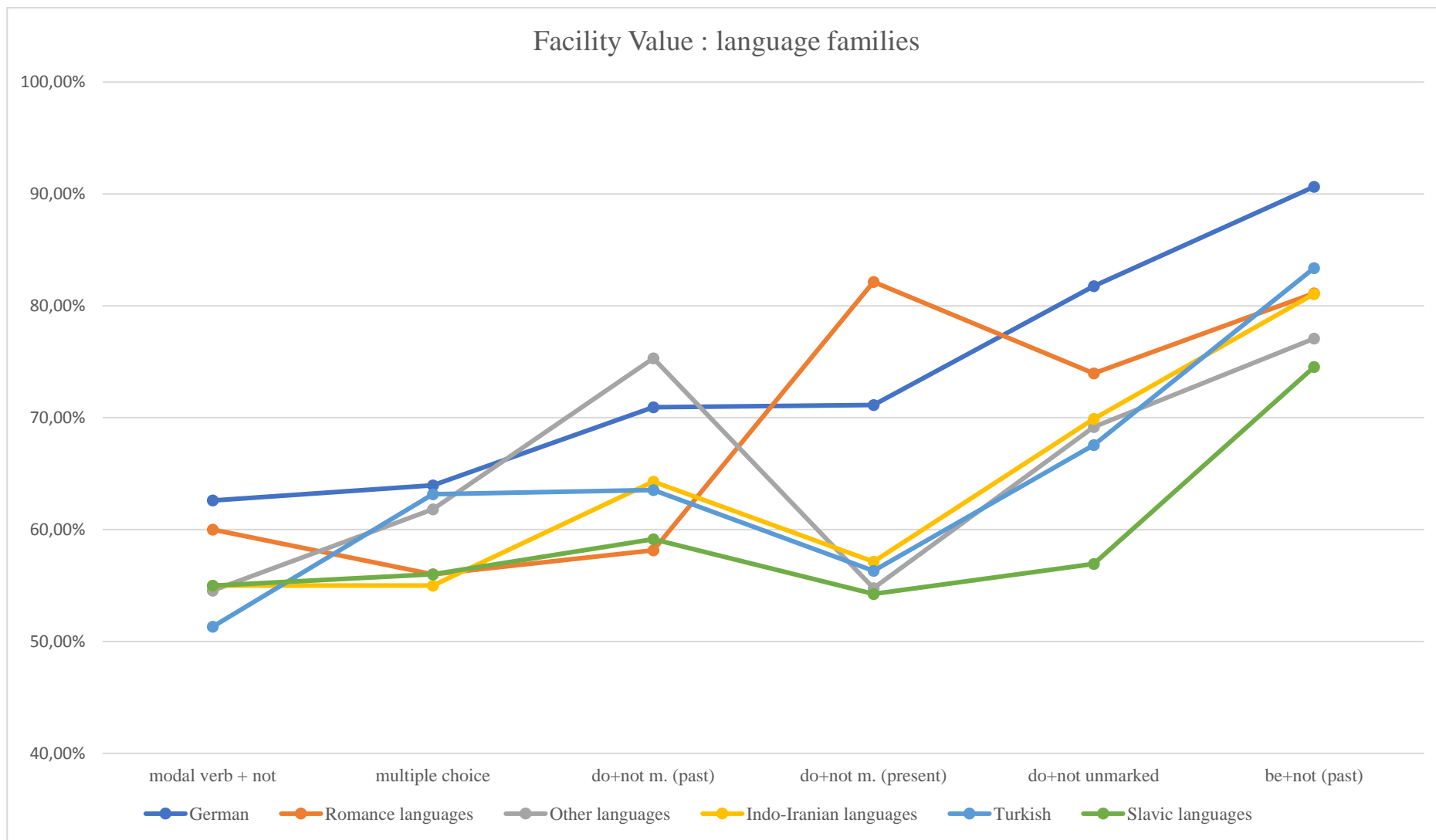
FIGURE 9: FACILITY VALUE : LANGUAGE FAMILIES

The trend chart reveals a highly inhomogeneous picture, especially as far as "do + not marked" constructions are concerned. As can be seen in figure 9, for participants whose first language is German the most difficult item group was "modal verb" at 62.60 percent, closely followed by multiple-choice items at 63.95 percent. Participants achieved 70.93 percent and 71.14 percent for item groups "do + not marked" for the present and past tenses and 81.76 percent for the item group "do + not unmarked". The easiest item group for this specific language family was "be + not (past)", at 90.64 percent. Participants made only a few mistakes when such a construction was required.

The Romance language family, on the other hand, provided a different insight. This participant group was the only one that appeared to have the most difficulty with multiple-choice items, since only 56 percent was achieved. Even though multiple-choice items do not count as negative constructions as the other items, they are still analysed in this study. A score of 58.57 percent was achieved for items concerned with "do + not marked" for the present tense. For modal verbs, which appeared to be rather challenging for other language families, participants of Romance languages achieved 60 percent. Moreover, 73.96 percent was achieved for items that are associated with the item group "do + not unmarked". The item group "be + not (past)", which appeared to be the easiest for all language families except Romance languages participants, reveals a score of 81.11 percent. The easiest item group seems to be "do + not marked (present)".

Participants of languages that were categorised as "other languages" display a similar order to participants whose first language is Turkish. For both language families the most difficult items appeared to be modal verbs since both participant groups achieved only slightly more than 50 percent. The second most challenging item group is "do + not marked" for present tense. While participants of "other languages" achieved 54.76 percent, Turkish native speakers scored 56.32 percent for this item group, which is minimally higher. The bar charts reveal that only around 60 percent was attained for multiple-choice items by both participant groups. For participants of "other languages" the facility value is higher for the item group "do + not unmarked" than for "do + not marked (past)". While 69.17 percent was achieved for unmarked constructions, 75.32 percent was reached for marked ones. A higher facility value is traceable among Turkish participants for "do + not unmarked", at 67.55 percent, while 63.53 percent was reached for "do + not marked (past)". The easiest item group was "be + not (past)" for both language families.

Participants of the Indo-Iranian and Slavic language family also have a similar order of facility values. Modal verbs are the most challenging items, whereas "be + not (past)" appear to be the easiest ones. While Slavic L1 speakers attained 74.53 percent for this particular item group, Indo-Iranian language speakers achieved 81.06 percent. "Do + not unmarked" has a higher facility value, at 81.76 percent for Indo-Iranian L1 speakers and 69.89 percent for Slavic native speakers, than "do + not marked" for present and past. Around 60 percent was achieved by Indo-Iranian language participants for these two item groups, whereas Slavic language participants achieved 54.25 percent for "do + not (present)" and 59.14 percent for this construction in the past tense.

For all language families, except for participants of the Romance language family, modal verbs appeared to be the most difficult items as this item group had the lowest facility value. "Be + not" seems to be the easiest item group. For "do + not marked (present)" a difference in facility values can be observed. There appears to be a trend that "do + not unmarked" constructions are easier than "do + not marked". Even though multiple-choice items cannot be regarded as constructions such as the other items, they are nevertheless included in the analysis.
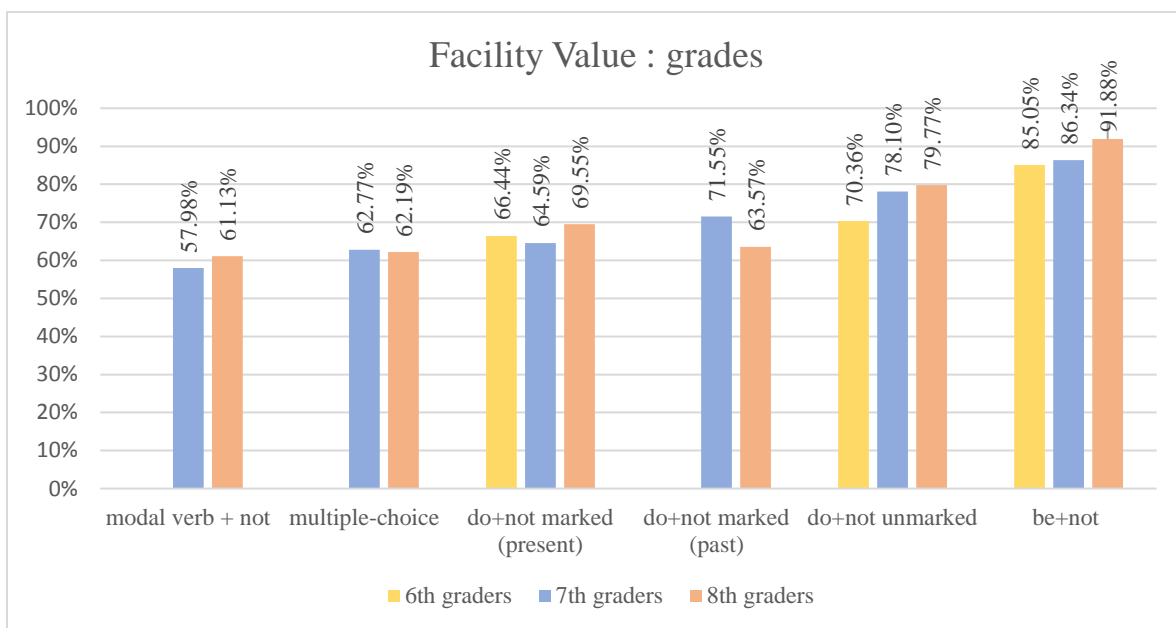

FIGURE 10: FACILITY VALUE : GRADES

Facility values of item groups are also considered per grade (see figure 10). As already explained previously, sixth graders only received 24 items. As this study focused on instructed English, the grammar test exclusively included grammar items that they had already been studied. Consequently, sixth graders only received "do + not marked (present)", "do + not unmarked" and "be + not (past)" items. The lowest facility value at 66.44 percent can be

discerned for the item group "do + not marked" for the present tense. Items associated with the "do + not unmarked" item group display 70.36 percent. Again, the easiest item group was "be + not", at a facility value of 85.05 percent.

Seventh and eighth graders had 39 items, including the item groups "modal verbs", "multiple-choice" and "do + not marked (past)", which is why a comparison between these two grades is more appropriate. Item groups "modal verb + not" and "multiple-choice" appeared to be difficult for both seventh and eighth graders. Modal verbs were the most challenging item group for seventh graders, at a facility value of 57.98 percent. For multiple-choice items 62.77 percent can be observed. Eighth graders appeared to have the most difficulty with multiple-choice items, as they display the lowest facility value at 61.13 percent. For modal verbs 62.19 percent was achieved. Seventh and eighth graders differ in their facility values of the item groups "do + not marked" for the present and the past tense. While "do + not marked" present constructions proved to be more problematic for seventh graders, eighth graders seemed to have more difficulty with past structures. Seventh graders showed a facility value of 64.59 percent for "do + not marked (present)" and 71.55 percent for the past. Eighth graders, on the other hand, display a facility value of 63.57 percent for past constructions and 69.55 percent for present ones. Unmarked constructions of "do + not" and the item group "be + not (past)" display a higher facility value for seventh and eighth graders.
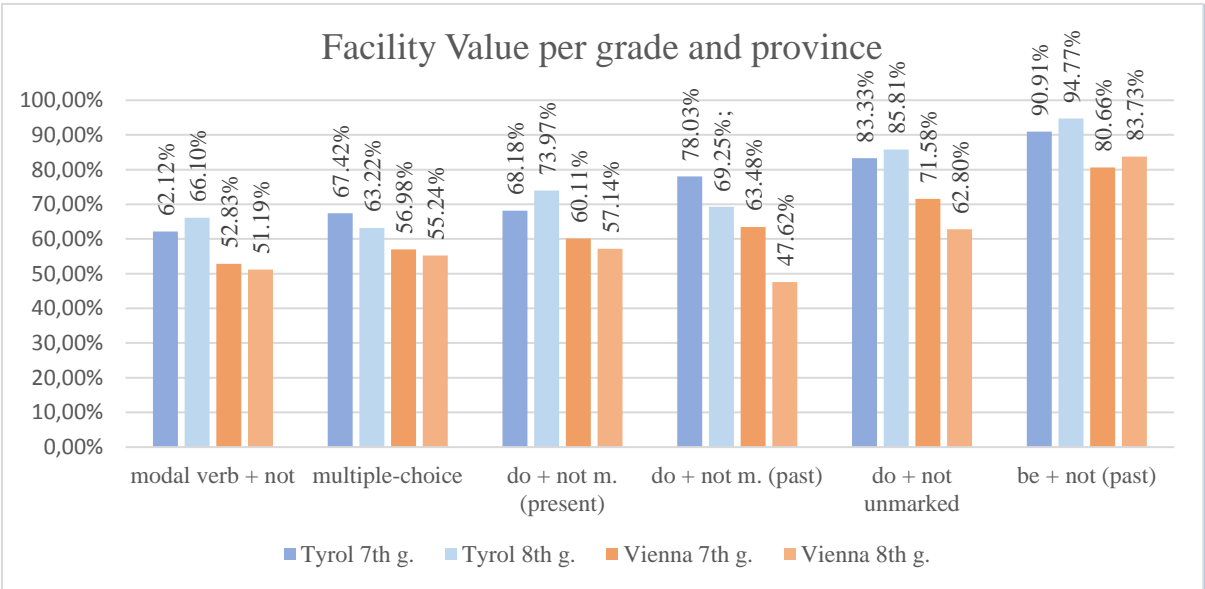

FIGURE 11: FACILITY VALUE : PROVINCES AND GRADES

A comparison of seventh and eighth graders is appropriate for an analysis of the two provinces. For Tyrolean and Viennese seventh graders the order of item groups is identical, even though they differ in facility values. Modal verbs were the most difficult items at 57.98 percent,

followed by multiple-choice items at 62.77 percent. The item group "do + not marked (present)" has the next highest facility value at 64.59 percent, followed by past constructions at 71.55 percent. The participants achieved the best results for item groups "do + not unmarked" and "be + not (past)", at well above 80 percent. Facility values for Viennese and Tyrolean eighth graders, however, differ greatly. Tyrolean participants display the following order and facility values of item groups: "multiple-choice" at 63.22 percent, "modal verb + not" at 66.10 percent, "do + not marked (past)" at 69.25 percent, "do + not marked (present)" at 73.97 percent, "do + not unmarked" at 85.81 percent and "be + not (past)" at 94.77 percent. The order of items, however, differs for Viennese eighth graders. Item group "do + not marked (past)" has the lowest facility value at 47.62 percent. Item groups that display the next lowest facility values are modal verbs, at 51.19 percent and multiple-choice items, at 55.24 percent. "Do + not marked (present)" items reveal a facility value of 57.14 percent, followed by "do + not unmarked" constructions, at 62.80 percent. "Be + not (past)" was again the easiest item group, at 83.73 percent. As with the weighted group score, since more Tyrolean eighth graders participated in the grammar test than Viennese eighth graders, the facility values are approximated to the Tyrolean results in the evaluation of all the participants.

6.3 Developmental Sequences

The developmental sequence method was established for this specific study. Five stages, based on insights by researchers such as Cancino, Rosansky and Schumann (1975), Adams (1978) etc. were established. A calculation of all stages is displayed in figure 12. In this figure, stage 0 is included to refer to participants' constructions that did not include any negative structure. Stages 1 – 5 refer to the stages that were established previously.

Stages	Stage 0:	Stage 1:	Stage 2:	Stage 3:	Stage 4:	Stage 5:	Summe:
	136	271	546	476	1131	2350	4910
in pct [%]:	2,77	5,52	11,12	9,69	23,03	47,86	100
SORTIERT:	Stage 0:	Stage 1:	Stage 3:	Stage 2:	Stage 4:	Stage 5:	
in pct [%]:	2,77	5,52	9,69	11,12	23,03	47,86	100

FIGURE 12: DEVELOPMENTAL SEQUENCES METHOD

The number 4910 is provided on the right side of the above figure, indicating the total sum of items for all of the participants. For 93 sixth graders, 10 items are analysed, whereas 20 items are considered for 199 seventh and eighth graders. If these numbers are multiplied and subsequently added together, they result in the number 4910. Once different filter criteria are applied, these numbers change. The first cell indicates how many items are assignable to which stages, whereas the last cell ranks stages according to percentages. If no filter is applied, which means that all participants are considered, there are 136 instances where no negative

construction was produced, which equals 2.77 percent. Stage 1 had the next lowest occurrence, at 5.52 percent. It can be observed that there are more instances of stage 2 (11.12 percent), than of stage 3 (9.69 percent). Stage 4 indicates an occurrence of 23.03 percent, whereas stage 5 had the highest rate at 47.86 percent.

Different filter criteria were applied for the other methods of data analysis. The stages will be ascertained for the Developmental Sequences method for all grades and first languages as well as the two provinces. First, stages are considered for the sixth, seventh and eighth grade.

	Sixth graders	Seventh graders	Eighth graders
Stage 0	3.44 %	2.86 %	2.2 %
Stage 1	10.43 %	3.61 %	5.5 %
Stage 2	12.26 %	11.43 %	10 %
Stage 3	0 %	11.55 %	12.56 %
Stage 4	24.84 %	24.12 %	20.38 %
Stage 5	49.03 %	46.43 %	49.31 %

TABLE 4: DEVELOPMENTAL SEQUENCES: GRADES

For all grades stage 0 occurred the least, at only around 3 percent. It is noteworthy that there are more incidences of stage 1 for sixth graders than for seventh and eighth graders. The same applies for stage 2, even though percentages do not deviate exceedingly. For sixth graders it is important to mention that since no modal verbs were included and participants did not employ incorrect auxiliaries at all, stage 3 is at zero percent. This means that at least 10 % (as can be seen for the other grades) are ranked among the other stages. For stage 4 it appears that sixth and seventh graders have similar instances at around 24 percent, whereas there is a 20.38 percent occurrence for eighth graders. As far as stage 5 is concerned, eighth graders have the highest occurrence at 49.31 percent, followed by sixth graders at 49.03 percent. Seventh graders have the fewest instances of stage 5 at 46.43 percent.

	German	Romance languages	Other languages	Indo-Iranian languages	Turkish	Slavic languages
Stage 0	1.87 %	0 %	7.69 %	0.95 %	2.44 %	6.77 %
Stage 1	2.88 %	4.55 %	10.77 %	5.24 %	10.44 %	13.87 %
Stage 2	12.64 %	7.27 %	10 %	3.81 %	8.89 %	8.39 %
Stage 3	9.36 %	13.64 %	9.23 %	11.90 %	11.56 %	8.87 %
Stage 4	20.31 %	30 %	11.92 %	47.62 %	29.78 %	27.58 %
Stage 5	52.94 %	44.55 %	50.38 %	30.48 %	36.89 %	34.52 %

TABLE 5: DEVELOPMENTAL SEQUENCES: LANGUAGE FAMILIES

Table 6 indicates the occurrence of stages per language families. The six language groups that were already analysed are displayed again by maintaining the same order as previously. It can

be observed that all language families except for the Romance languages have instances of stage 0, which means that no negative construction was filled in. Slavic languages and the languages titled as "other languages" have the highest occurrence of stage 0. As far as stage 1 is concerned, German has the lowest occurrence, at 2.88 percent, whereas Slavic languages have the highest, at 13.87 percent. As far as stage 2 is concerned, it can be discerned that German participants have the most instances, at 12.64 percent, while Indo-Iranian language speakers only display 3.81 percent. Romance languages have the most instances of stage 3, at 13.64 percent. Overall, all language families reveal around 10 percent for stage 3. There are significant differences as far as stage 4 is concerned. While the language category "other languages", as well as German, reveal rather few occurrences at 11.92 percent and 20.31 percent for the latter, the Indo-Iranian language family has an occurrence of 47.62 percent. The other three language families display around 30 percent at stage 4. These results are consistent as far as stage 5 is concerned. Since "other languages" and German have low percentages at stage 4, they have higher results at stage 5. German has the most occurrences of stage 5, at 52.94 percent, along with "other languages" at 50.38 percent. Romance language participants revealed a score of 44.55 percent at stage 5. While Turkish and Slavic language speakers have an occurrence of 36.89 percent and 34.52 percent, the Indo-Iranian language family resulted in 30.48 percent.

	Vienna	Tyrol
Stage 0	4.86 %	1.64 %
Stage 1	12.43 %	1.76 %
Stage 2	9.77 %	11.86 %
Stage 3	10.92 %	9.03 %
Stage 4	28.96 %	19.81 %
Stage 5	33.06 %	55.91 %

TABLE 6: DEVELOPMENTAL SEQUENCES : GRADES

In Vienna, there are considerably more incidences of stage 1, at 12.43 percent. For Tyrolean participants, on the other hand an occurrence of 1.76 percent can be observed. As far as stage 2 is concerned, there is a 2 percent higher manifestation for Tyrolean participants than for Viennese. In Vienna, there is a fairly balanced distribution of both stage 4 and stage 5, both at around 30 percent. In Tyrol, however, there are considerably fewer occurrences of stage 4 (19.81 percent) than stage 5 (55.91 percent).

7. Discussion of results

This chapter will focus on the discussion of previously indicated results. As already mentioned, 292 students of two lower secondary schools filled in the grammar test: 93 students attended sixth grade, 119 seventh and 80 eighth grade. As far as the participant distribution by province is concerned, it should be mentioned that there were more Tyrolean than Viennese participants for all three grades. Table 1, which displayed the number of participants according to their first language, indicates that more German L1 speakers participated than speakers of other languages. These numbers need to be considered when examining and interpreting the results. The previous chapter analysed results for the Group Score Measure method, Acquisition Index and the Developmental Sequences method separately. The same chronological order will be followed for the interpretation as well.

Weighted group scores

The first part of data analysis relates to the weighted group scores of different participant groups. First, the six language groups were examined. German L1 speakers achieved the highest weighted group scores, followed by participants of the Romance language family and a group categorised as "other languages". Slightly lower scores were achieved by participants of Indo-Iranian languages and Turkish. Participants of the Slavic language family revealed the lowest weighted group score. These numbers provided a general overview of which language families performed best in the grammar test. According to the statistics, German L1 speakers had the least amount of difficulty with the tasks. Obviously, it should be taken into account that far more participants can be assigned to the German language family than any other language group. As a consequence, the result of one Slavic language participant, for instance, has far more weight than that of one German language participant. A German L1 student who underachieved did not contribute to the weighted group score as much as a Slavic native speaker did. Figure 7 revealed striking differences between Viennese sixth graders and Tyrolean sixth graders. While a weighted group score of only 44.17 percent was achieved by Viennese participants, 82.69 percent was achieved by Tyrolean sixth graders. It is problematic to explain this in terms of statistics since there were far more Tyrolean participants than Viennese. As for seventh and eighth graders, it is noteworthy that there is not such an extreme difference in weighted group scores. Tyrolean seventh and eighth graders achieved better scores than Viennese students by more than 10 percent, yet their scores do not resemble those of sixth graders. As far as all of the participants are concerned, it could be observed that 170 out of the 193 participants were German L1 speakers in the Tyrolean school, whereas only 27 out of 99 participants in Vienna were German L1 speakers.

It could be that first language has an influence on how fast students reach a certain stage. According to Cancino, Rosansky and Schumann (1975: 210), while most learners go through similar stages during their language learning process, not all arrive at the same stage at the same time, or in this case, at the same age. Out of 68 Tyrolean sixth graders, 59 had German as their first language, whereas only 9 out of the 25 Viennese participants were German L1 speakers. It is therefore probable that German L1 sixth graders succeeded in filling in the correct solutions sooner than other L1 speakers. Even though there is some evidence in this specific study to suggest that German L1 speakers generally performed better, there are not enough samples to corroborate this claim.

Weighted group scores of the two provinces of Vienna and Tyrol were also reviewed. As explained previously, participants of two lower secondary schools completed the grammar test, one located in a rural region of Western Tyrol and the other one in an urban area of Vienna. A tendency according to which participants in the Tyrolean school, especially sixth graders, performed better was observed and already illustrated. This aspect leaves room for interpretation and diverse conclusions. In a city such as Vienna, a multitude of different cultures and languages meet, which could possibly, in some cases, result in language barriers. Even though, according to the data, German L1 speakers tended to achieve better weighted group scores and most Tyrolean participants had German as their first language, it is not possible to substantiate such an idea. After all, there are not enough samples for such a generalisation. One possible reason for this might be that the school in Western Tyrol had more successful students than the Viennese school. This does not necessarily mean that rural schools perform better when compared to urban ones. On the contrary, as McElvany (2019) suggested in an interview with journalists on the platform *news4teachers*, there may be greater differences between two schools in an urban setting than between a rural and an urban school. In a city such as Vienna, for instance, there are many lower secondary schools, such as "AHS" and "NMS" (see glossary). In a rural area of Tyrol, on the other hand, there are only a few lower secondary schools available. A high-performing Tyrolean student would probably attend an NMS, if this is the only school accessible within a radius of 30 minutes. A high-performing Viennese student would rather opt for an AHS if both school systems can be reached within the same amount of time (Fabry 2019). This circumstance might be the reason why Viennese participants achieved lower results than Tyrolean students in this specific study. It would be interesting to conduct a study which would include more than two provinces and a selection of both forms of schools. That way it would be possible to determine the performance of participants in different environments in more detail.

Acquisition Index

The present thesis also examined the Acquisition Index, based on Dulay and Burt (1978), for the items in the grammar test. Table 2 provided an overview of how easy or challenging individual items were. It could be observed that items associated with the Bilingual Syntax Measure method, which was described more thoroughly in chapter 3.2, and multiple-choice items revealed poor results. The reason why the BSM task was not included in the data analysis was described in chapter 5.5. The task format was not entirely successful for the purpose of this thesis. First, the example sentence provided a "be + not" construction, which lead to an increased use of this structure for all items. Secondly, item 4 was not well formulated seeing as how a present continuous form would have been more appropriate. In general, structures that include "be + not" or "do + not" require a considerable amount of previous knowledge about language, according to Gass, Behney and Plonsky (2013: 116). As this task has shown, difficulties may arise if these two constructions are used in the same task. Retrospectively, the BSM method is more suitable for eliciting oral proficiency, as it allows for clarification and further enquiries.

Multiple-choice items appeared to be rather challenging as well. An advantage of this format is that students with poor writing skills were able to demonstrate their capabilities. However, this format had disadvantages of its own, such as time constraints for the test developer and the difficulty of item development (Carneson, Delpierre & Master 2016: 4-5). Except for items 35 and 38, multiple-choice items resulted in poor performance. It is possible that participants were not familiar or comfortable enough with the format of multiple-choice tests to achieve good results. Another reason for these results could be the structure of the grammar test. Since the multiple-choice items were placed in the last task, participants might not have concentrated enough to fill them in carefully. Nevertheless, the task provided some insight into the multiple-choice items that proved to be easier and more challenging for participants.

In order to calculate the acquisition index for different participant groups, which would be filtered according to first languages and grades, item groups were determined. According to Wode (1978: 115-117), learners of the same or related languages have similar developmental sequences during second language acquisition. Based on this assumption, languages that belong to the same language family were assigned to one group. As already mentioned, there was one participant group that was categorised as "other languages" since their first languages were not appropriately assignable to the given language families. According to the statistics, "modal verb + not" generally appeared to be the most challenging item group. Items belonging to "do + not

marked" for present and past tenses were, to some degree, difficult as well. Nevertheless, better results were achieved for these item groups than for modal verbs. These results were not consistent with previously cited literature. According to researchers such as Cancino, Rosansky and Schumann (1975), Wode (1978), Adams (1978) and Ellis and Shintani (2014), modal verbs appear at stage 3 and are easier to acquire than "do + not marked" constructions. However, figures 8, 9 and 10 indicate that the majority of participants had more difficulty with modal verbs than with "do + not marked" constructions. This could be due to the integration of modal verbs into a task that otherwise predominantly focused on "do + not marked (past)" items. It should be noted, nevertheless, that the whole task only included two items with "modal verb + not". Hughes (2003: 44) claims that a test is more reliable if it covers several items of the same construction. Even though this study provides evidence that modal verbs tended to be, to some extent, more challenging for participants, two instances of "modal verb + not" items might not lend strong substance to that claim. For a statistically supported conclusion, it would be advisable to create a new test which have a balanced amount of all item groups.

Unmarked constructions of "do + not" appeared to be easier than marked constructions, which is in accordance with previously mentioned studies (e.g. Cancino, Rosansky and Schumann 1975, Wode 1978,…). Generally, around 60 percent was achieved for marked constructions, whereas over 70 percent could be observed for unmarked constructions. As can be deduced from figure 9, individual deviations were observed for the Romance and Slavic language family, however, there was a general tendency that marked constructions were more challenging than unmarked ones. While Romance language participants had a distinct peak at 82.14 percent for "do + not marked (present)" items, the language family "other languages" reached its apex at 75.32 percent for "do + not marked" past constructions. Interestingly, "be + not (past)" structures seemed to be the easiest item group for most participant groups. This could be due to the fact that it consists of a simpler structure than "do + not marked" constructions. Furthermore, participants might have benefited from the example sentence, which provided this very same structure at the beginning of the task. Overall, as far as facility values of different item groups for language families are concerned, it could once again be observed that the German, the Slavic and the Indo-Iranian language family had a similar order of item groups. Modal verbs and multiple-choice items were the most challenging, followed by either "do + not marked" for the past or for the present tense. Unmarked constructions of "do + not" and the item group "be + not (past)" were clearly easier. Even though participants of languages categorised as "other languages" as well as the Romance language family show different results, it can be concluded that for the majority of participants, the "modal verb +

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not" was the most challenging item group and the "be + not (past)" the easiest. Moreover, there was a general tendency that unmarked structures were easier than marked ones.

Figure 10 revealed facility values of item groups for the sixth, seventh and eighth grade. Only the following item groups were relevant for sixth graders: "do + not marked (present)", "do + not unmarked" and "be + not (past)". As far as sixth graders were concerned, results corresponded with the literature studied previously. Marked structures of "do + not" were more challenging than unmarked constructions. Since both seventh and eighth graders received an equal number of items, a comparison between these two grades was more appropriate. Results supported the literature studied in that unmarked constructions of "do + not" were simpler than marked structures for both grades. Butterwort and Hatch (1972: 239) rightfully argued that the reason for this phenomenon could be that simple "don't + verb" expression can be learned by heart and are easily reproduced. Moreover, according to Pienemann's (1998: 6) Processability Theory, learners reproduce grammar features better if they have already been processed. It is therefore possible that unmarked structures are more easily processed than marked constructions (Pienemann 2005: 4-6). Facility values of individual item groups of Viennese and Tyrolean seventh and eighth graders were also analysed. Regardless of weighted group scores, it was asserted that the sequence of item groups was mostly similar for seventh and eighth graders of both provinces. Item groups "be + not (past)" and "do + not unmarked" appeared to be the easiest, whereas modal verbs were the most difficult item group. Once more, the marked constructions of "do + not" was the only difference that could be observed. One explanation for this could be that "do + not marked (past)" phrases were easier for seventh graders since this structure was learned recently. Eighth graders, however, had recently learned even more complex grammar aspects, which is why past constructions of "do + not" might have been forgotten. Since eighth graders learned "do + not" in the present tense quite some time ago, it probably entered their long-term memory. One could also adopt Lantolf's (2005: 339) view that it is not entirely possible to determine a fixed sequence of item groups since language learning is different for each learner. It depends for the most part on the environment and the learners' circumstances. Possible reasons for this can merely be assumed and it cannot be explained with any certainty why the "do + not marked (past)" was noticeably more difficult than "do + not marked (present)" for some participant groups. Still, it can be stated that for the majority of participants the marked constructions, whether they be marked for the present or the past, are more challenging than the unmarked "do + not" item group.

Developmental sequences

Since the Group Score Measure method and the Acquisition Index did not provide enough results, another method of data analysis, with a focus on the stages, was developed. Based on the stages explained at length by researchers such as Cancino, Rosansky and Schumann (1975), Wode (1978), Adams (1978), Tarone and Swierzbin (2009) and Ellis and Shintani (2014), five stages were determined for the present thesis. Scores from 0 to 5 were then accorded to individual student answers in a new MS Excel sheet. Due to time constraints, only three out of the seven tasks were examined. What needs to be kept in mind is that this means that only 10 items for sixth graders and 20 items for seventh and eighth graders were considered. It was hypothesised that sixth graders would have the most stage 1 occurrences, seventh graders would have fewer and eighth graders would hardly have any. Moreover, sixth graders should have the fewest instances of stage 5 and eighth graders should have the most occurrences of stage 5. As a matter of fact, sixth graders indeed exhibited more instances of stage 1, stage 2 and stage 4 than the other grades. Nevertheless, sixth graders had a high occurrence of stage 5, even higher than seventh graders. This could be due to the fact that they did not receive as many items as the other grades. For this reason, sixth graders also did not have any instances of stage 3. On the other hand, an explanation for this phenomenon could also be that sixth graders had recently learned this construction and were therefore able to reproduce it better than seventh graders. It needs to be mentioned once again that seventh and eighth graders answered more items than sixth graders. A comparison between seventh and eighth graders was therefore appropriate. Interestingly, eighth graders revealed slightly more instances of stage 1 than seventh graders. Stage 2 and stage 3 appeared to have an approximately equal percentage for both grades. Seventh graders revealed more instances of stage 4 than eighth graders. When considering these two grades alone, the assumption that eighth graders might have more stage 5 occurrences than seventh graders proved to be true. As Tarone and Swierzbin (2009: 37-38) mentioned, input and intake do not necessarily have to be identical. This means that teachers can teach certain constructions, in this case "do + not marked (present)", albeit, some students might not have been able to process it thoroughly. Thus, it is possible that sixth graders were recently taught this word construction and reproduced it more accurately than seventh graders, even though they had not entirely processed it (Pienemann 1998: 4-6). Seventh graders, however, also showed that these structures might not have been processed yet. Therefore, there were generally fewer instances of stage 5. Eighth graders were probably more able to process, understand these structures and reproduce these structures correctly. All in all, this indicates what Corder (1967: 165) referred to as "built-in syllabus". This signifies that stages can neither be skipped, nor can

they be processed outstandingly quickly. It is the learner's needs and not the teacher or the school syllabus that determines what learners acquire. According to Doughty (2003: 262), participants who are instructed, learn a language faster than those who acquire it in a natural way. Be that as it may, whatever is learned can be forgotten just as fast.

Table 5 provided insight into developmental sequences of different language groups. Again, there was some evidence that German L1 speakers had the most stage 5 occurrences, at 52.94 percent, whereas Slavic and Indo-Iranian L1 speakers proved to have significantly fewer. Again, it could be possible that participants pass through the same or similar stages, irrespective of their L1; however, the tables indicate that this does not occur at the same point in time (Cancino, Rosansky & Schumann 1975: 210). It is probable that German L1 speakers reach the last stage earlier than participants of other groups such as representatives of the Indo-Iranian and Slavic language family. Interestingly, the Indo-Iranian language family was the only one that revealed more occurrences of stage 4 than of stage 5. Participants of this language family were probably in a "Hypothesis Space", as mentioned by Pienemann (1998: 9-10), which means that they were currently more at stage 4 than at stage 5. Since there were already some instances of stage 5 for Indo-Iranian L1 speakers, it can be argued that almost all participants could arrive at the last stage eventually.

As far as a comparison of the schools in Tyrol and Vienna is concerned, table 6 provided interesting insight as well. More instances of stage 1, stage 3 and stage 4 were observed among Viennese participants. Interestingly, however, there were more stage 2 occurrences in Tyrol than in Vienna. Significantly more results at stage 5 were attained by Tyrolean participants, at 55.91 percent, whereas only 33.06 percent were achieved by Viennese participants. The reasoning behind this could be the same as previously mentioned for weighted group scores and facility values for item groups. As already mentioned, in order to offer more insight into the differences between provinces, it would be advisable to design a test that includes more than two provinces and a greater number of participants from more than two schools.

8. Conclusion

The purpose of the present thesis has been to analyse the developmental sequences of lower secondary students in second language acquisition of English negation. In order to determine developmental sequences, a grammar test was designed that required students to produce short responses that would involve English negation. A total of 292 lower secondary students participated in this study: 193 students attended an NMS in a rural area of Western Tyrol and 99 attended an urban NMS in Vienna. The methods of data analysis were the Group Score Measure method and the Acquisition Index, based on Dulay and Burt's (1978) study and the Developmental Sequence method, which was specifically designed for the present thesis.

Before analysing and interpreting the data, an overview of the literature studied was provided. A short introduction to Second Language Acquisition offered insight into the research field. Definitions of SLA, the significance of errors for language learning (Ellis 1997), as well as Selinker's (1972) term "interlanguage" were touched upon. Moreover, studies focusing on developmental sequences in general were mentioned. Dulay and Burt's (1978) study played a prominent role, as their methods of data analysis would prove to be of great importance for this study. Furthermore, Corder's (1967) notion of a "built-in syllabus", Krashen's (1982) Monitor Model, as well as Pienemann's (1998, 2005) Processability Theory were presented and are equally noteworthy. Naturally, since these studies all support the idea of fixed developmental sequences that can easily be determined, it seemed necessary to include opposing viewpoints as well. Lantolf (2005) and Lantolf and Thorne (2007), as well as supporters of Dynamic Systems Theory (e.g. Dörnyei, MacIntyre & Alastair 2015, De Bot 2015) claim that it is not feasible to describe fixed stages that all learners pass through, since language learning is too non-linear and dynamic. Nevertheless, since the present study mainly adopts the viewpoint of researchers who attempted to determine stages, an overview of the studies on the acquisition of English negation was subsequently provided. Studies conducted by Butterwort and Hatch (1972), Cancino, Rosansky and Schumann (1975), Schumann (1976), Wode (1978), Adams (1978), Tarone and Swierzbin (2009), Lightbown and Spada (2013) and Ellis and Shintani (2014) were introduced, including, but not limited to, an overview of the stages these researchers discovered.

Thereafter, the empirical part of this thesis was presented. Literature dealing with test design was consulted. When designing a test, it is advisable to consider a scoring system that is as objective as it is feasible. Even though short one or two-word utterances permit a more objective scoring than open ended questions, an impartial judgment on the part of the scorer is still

necessary when participants produce spelling mistakes (Hughes 2003: 48). The development of the individual items was then explained thoroughly. The grammar test consisted of 39 items, distributed over a total of seven tasks involving English negation. Items were based on *More!* (Gerngross et al. 2017, 2018) textbooks, due to the fact that participants were most familiar with such formats. Since the test underwent a preliminary trial and appeared to be not altogether successful, the instructions and example items were revised. Following data collection, data was analysed by means of the three previously explained methods. A MS Excel sheet was used for the Group Score Measure method and the Acquisition Index, based on Dulay and Burt's (1978) study. Filters for L1, grade and province were applied, so that different participant groups could be formed. While the weighted group scores revealed which groups of participants achieved the best scores, the Acquisition Index highlighted which item groups were the most challenging. As these two methods did not provide enough evidence for developmental sequences, another method of data analyses, which was titled "Developmental Sequence method", was established. Based on previously examined studies (e.g. Cancino, Rosansky & Schumann 1975, Wode 1978, etc.) regarding developmental sequences of English negation, five stages were determined for this study. A new MS Excel sheet was created and numbers 0 – 5 were typed in for each of the item in three selected tasks. Stages were again considered according to the different participant groups, such as fist languages, grades and provinces.

Results revealed that in this specific study weighted group scores differed greatly for language families, grades and provinces. According to the statistics, German L1 speakers achieved the best scores for all three methods of data analysis when compared to other language families. This could be due to the great linguistic distance that certain L1 speakers might face when first acquiring the English language. While most participants might pass through similar stages, some arrive there earlier than others, as was especially noticeable for weighted group scores of sixth graders in Tyrol and Vienna (Cancino, Rosansky & Schumann 1975: 210). Another reason for this could be that there were far more participants whose first language was German than participants from other language families. Consequently, the score was not affected nearly as much by the poor performance of individual German L1 speakers as it was by participants of other language families. Interestingly, modal verbs and multiple-choice items appeared to be challenging for most language families. Previous studies concerned with English negation (e.g. Wode 1978 and others) have shown that modal verbs were easier to acquire than "do + not marked" constructions. As mentioned previously, it is possible that modal verbs were particularly challenging because the respective task mainly consisted of "do + not marked (past)" items. There were only two instances of modal verb formation in the gap filling

exercises, however, which means that there is not enough evidence to verify whether or not modal verbs are more challenging than "do + not marked" items.

As far as provinces are concerned, the scores indicated that Tyrolean participants achieved better results than Viennese participants. As already mentioned, generalisations cannot be made. There is not enough evidence to claim that one province is capable of achieving better results than the other. It is often the case that there is a far greater difference between two schools in the same city than between an urban and a rural school (McElvary 2019). As explained previously, it is possible that there were more students who performed well in the Tyrolean NMS than in the Viennese NMS. According to Fabry (2019), students who excel in a city such as Vienna tend to opt for an AHS rather than an NMS, whereas in Tyrol, oftentimes an NMS is the only plausible option in terms of distance between school and home.

Sixth, seventh and eighth graders were also considered separately for all three methods of data analysis. It was hypothesised that eighth graders should have the highest proportion of stage 5, followed by seventh and sixth graders. However, results revealed that sixth graders had more instances of stage 5 than seventh graders. This could be due to what Corder (1967: 165) referred to as "built-in syllabus". Participants pass through similar stages and arrive at similar stages when they are ready. Stages cannot be skipped or passed through too quickly. They can only acquire what they are able to process (Pienemann 1998: 6). Yet sixth graders did not receive as many items as seventh and eighth graders, which is why it is not appropriate to compare them. Examining seventh and eighth graders revealed that there was some evidence of developmental sequences. Seventh graders revealed a higher percentage of stage 4 and fewer instances of stage 5 than eighth graders. This evidence suggests that participants pass through similar stages, even though some arrive at a specific stage earlier than others (Cancino, Rosansky & Schumann 1975: 210).

Overall, it was not possible to offer explanations for all of the issues that arose. Nevertheless, the present study provided evidence that there are developmental sequences that conform to the stages that were determined by previously mentioned researchers such as Cancino, Rosansky and Schumann (1975) and Wode (1978), for instance. Since there were instances of all five stages for different participant groups, it can be argued that there are indeed developmental sequences observable for lower secondary students. Even though not all participant groups arrived at the same stages at the same time, there is some evidence to suggest that most participants will eventually succeed and reach the last stage if they continue learning English.

9. References

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10. List of figures and tables

MS Excel Sheets are available under the following links:

Weighted Group Score Measure method:

https://docs.google.com/spreadsheets/d/15DSmw2nLBZkwEUFLJHRXSin9fZG1qiSPgpQR1
IcJFVI/edit?usp=sharing

Developmental Sequence method:

https://docs.google.com/spreadsheets/d/1MQtc9KF0gmVGoHA6iCunwWloACneiAanSQZvy
YO6oaM/edit?usp=sharing

11. Glossary

AHS : Allgemein bildende höhere Schule (grammar school)

BSM : Bilingual Syntax Measure method

EA : Error Analysis

IL : Interlanguage

L1 : First language, mother tongue

L2 : Second language

NMS : Neue Mittelschule (lower secondary school)

SAI : Syntax Acquisition Index

SLA : Second Language Acquisition

TL : Target language

WGS : Weighted Group Score

Grammatical competence test.

Was ist deine Muttersprache?_____

Übung 1. *Verwende die **Present Simple Tense**. Setze die Verbformen richtig ein.*

1. I ___*play*___ (play) computer games in the evening.

2. Our dog _____ (not play) football.

3. My father _____ (not go) to work by car.

4. I _____ (help) my brother with her homework.

5. Susan _____ (not like) basketball.

Übung 2. *Beantworte die Frage und berücksichtige die Bilder. Schreibe einen ganzen Satz in der **Present Simple Tense.***

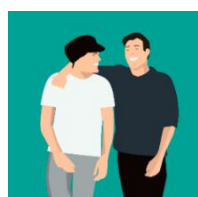*Example:* Is the man crying?   _____*No he isn't*_____.

1. Does the cat watch TV? _____

2. Is the teacher angry? _____

3. Does the girl look sad? _____

4. Are they bored? _____

Exercise 3. *Vervollständige die Sätze und verwende die **Present Simple Tense**.*

1. He _likes_ (like) apples, but he _____ (not like) bananas.

2. I _____ (play) football, but I _____ (not play) basketball.

3. She _____ (speak) French, but she _____ (not speak) Italian.

4. You _____ (watch) TV, but you _____ (not listen) to the radio.

5. We _____ (go) shopping every Saturday, but we _____ (not go) shopping on Sundays.

Exercise 4. *Setze die Verben in die richtige Form.*

Samantha

From Monday to Friday, I always _wear_ (wear) my school uniform. I _____ (not like) it. It's a blue skirt and a white blouse with black shoes. I think that this uniform _____ (look) ugly, but my parents _____ (not think) so. They always _____ (tell) me that it _____ (not look) that bad. In the evenings, I usually _____ (wear) jeans and a shirt. I _____ (not wear) dresses, because I _____ (not like) them and I _____ (not have) any. My best friend, Sue, _____ (love) dresses, but she _____ (not like) skirts.

Exercise 5. *Verneine die Sätze, sodass sie das Gegenteil ausdrücken.*

Example: I was at home yesterday. _____*I wasn't at home yesterday*___.

1. We were at home on Saturday. _____

2. They were very tired last night. _____

3. I was at the cinema from 8 to 10 pm. _____

4. His books were on his desk. _____

5. We were on holiday last week. _____

Exercise 6. *Setze die Verben in der richtigen Form ein. Verwende die **past form***.

Example: Last week, I ___*went*___ (go) to the park and ___*saw*___ (see) a squirrel.

1. Yesterday, I _____ (not can) write you an email because my laptop _____ (not work).

2. Yesterday, I _____ (not get up) at 7 o'clock because I _____ (not hear) my alarm clock.

3. She _____ (not can) come to the party because she _____ (not feel) well.

4. He _____ (not watch) the movie yesterday because he _____ (not be) at home.

5. My sister and I _____ (not have) the money, so we _____ (not buy) new clothes.

Exercise 7. *Entscheide dich für die richtige Option und kreuze sie an. Vervollständige die Sätze.*

1. _____, I will look after your cat.

A) Not worry   B) Worry not   C) Don't worry

2. You _____ her – she already knows.

A) needn't tell   B) needn't to tell

3) You never work on Sundays, _____?

A) do you   B) don't you   C) didn't you

4) I think I _____ tennis tomorrow.

A) was not going to play   B) am not going to play   C) I not going to play

5) I missed the bus, so I _____ on time.

A) mightn't been   B) mightn't be   C) might wasn't

An die Erziehungsberechtigten der MIM Wendstattgasse

Sehr geehrte Damen und Herren,

im Rahmen meiner Masterarbeit an der Universität Wien möchte ich eine Studie zum Zweitspracherwerb durchführen. Dazu wird mit den Schülern und Schülerinnen eine einfache schriftliche Grammatikübung zum Thema Verneinungen (*negations*) durchgeführt. Ziel der Studie ist es herauszufinden, ob es erkennbare Erwerbssequenzen/ Phasen im Zweitspracherwerb gibt.

Generell wurden die Entwicklungssequenzen im Zweitspracherwerb bereits reichlich erforscht, jedoch wurde der Erwerb der englischen Negationen im österreichischen Schulkontext noch unzureichend untersucht. Da es für Lehrpersonen wichtig ist, Kenntnisse über den Erwerb von Fremdsprachen zu haben, wird diese Studie weitere Einblicke in diese Thematik ermöglichen.

Dies ist eine quantitative Studie, weshalb die Grammatikübungen **anonymisiert** werden. Das bedeutet, dass Ihr Kind in meiner Studie **nicht erwähnt** wird und auch den Namen nicht auf den Grammatikzettel schreiben muss. Die gesammelten Daten werden ausschließlich für Forschungszwecke verwendet und werden nicht weitergegeben.

Außerdem haben die Teilnahme oder Nichtteilnahme an diesen Grammatikübungen keinen Einfluss auf die Schulnoten.

Die Erhebungen werden im Oktober oder November stattfinden und ca. 20 min dauern. Ich stehe gerne für weitere Fragen zur Verfügung (C.thoeny@gmx.at).

Herzlichen Dank im Voraus für Ihre Mithilfe!

Charlotte Maria Thöny

✄ —————————————————————————————————————

Ich stimme hiermit zu, dass mein Sohn / meine Tochter _____
am Forschungsprojekt „Zweitspracherwerb" teilnehmen darf.

Ich habe das Informationsblatt gelesen und bin mir über die Ziele der Studie im Klaren. Ich erkläre mich damit einverstanden, dass die erhobenen Daten für Forschungszwecke verarbeitet und genutzt werden dürfen.

_____
Datum und Unterschrift des/der Erziehungsberechtigten

Abstract (English)

The topic 'developmental stages in second language acquisition' has generally been examined quite extensively; however, developmental sequences in second language acquisition of English negation in Austrian lower secondary settings have not been investigated thoroughly. The present thesis examines learner language and the mastery of English negation of 292 participants of two lower secondary schools. A grammar test is designed in order to determine developmental sequences of sixth, seventh and eighth graders. Before data analysis, a theoretical background is provided. The literature review includes Pienemann's (1998) Processability Theory, Corder's (1967) 'built-in syllabus', as well as Dulay and Burt's (1978) research. Moreover, studies concerned with negation (e.g. Cancino, Rosansky & Schumann 1978, Wode (1978), etc.) are discussed. Data are analysed by means of the Group Score Measure method and the Acquisition Index, according to Dulay and Burt (1978), and the Developmental Sequence method, which is specifically designed for this thesis. Results are evaluated on the basis of theories concerning developmental sequences.

Zusammenfassung (Deutsch)

Die vorliegende Masterarbeit befasst sich mit den Entwicklungssequenzen im Zweitspracherwerb von österreichischen Unterstufenschüler/innen. Generell wurden Prozesse und Stadien des Zweitspracherwerbs bereits erforscht, jedoch gibt es nur wenige die sich mit dem Erwerb von englischen Negationen, vor allem im österreichischen Kontext, befassten. Diese Masterarbeit erforscht das Beherrschen von Negationen von 292 Unterstufenschüler/innen aus zwei Neuen Mittelschulen Österreichs. Dafür wird ein Grammatiktest entworfen, um die Stadien der Zweit-, Dritt- und Viertklässler festzustellen. Bevor die Daten ausgewertet und analysiert werden können, wird ein Literaturüberblick zur Verfügung gestellt, wobei vor allem Studien von Pienemann (1998), Coder (1967) und Dulay und Burt (1978) dargestellt werden. Forschungen zu englischen Negationen (z.B. Cancino, Rosansky und Schumann 1978, Wode 1978 usw.) werden ebenfalls erläutert. Die Daten werden anhand von drei verschiedenen Methoden ausgewertet, wobei die ‚Developmental Sequence method' speziell für diese Studie entwickelt wurde. Die Ergebnisse werden anschließend interpretiert und mit dem vorherigem Literaturüberblick in Verbindung gebracht.