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Acquisition of subject-verb agreement and word order by Nepali learners of English:

The Bottleneck Hypothesis in L2 acquisition

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Abstract

The thesis investigates Nepali L1 speakers' knowledge of syntax and morphology in L2 English to test whether functional morphology is more difficult than syntax. Accordingly, the study mainly included two constructions: subject-verb agreement and word order. Subject-verb agreement was used to test knowledge of functional morphology while word order was used to test the knowledge about syntax. The experiment included a total of 48 participants from Nepal between the ages of 15-18 and was carried out in a private boarding school in Kathmandu.

The experiment was based on an online survey tool, Survey Gizmo, which included an acceptability judgement test, a proficiency test and a background questionnaire. The experiment used acceptability judgement test as the main method to collect the required data. The main test included 46 test items in total, out of which 10 were fillers. The test included simple declarative main clauses with lexical verbs and all of them begin with DP subjects. Accordingly, subject-initial declarative sentence (in simple past tense) tested word order (syntax) while subject-verb agreement (functional morphology) was tested by subject-initial declarative sentence (simple present tense) with 3rd person singular and plural subject. In addition, the experiment included a subset of a Standardized Oxford Proficiency test which contains 40 multiple choice test items in order to examine the proficiency level of the participants along with a set of background questionnaires.

The main findings reported in the study show that subject-verb agreement is significantly more difficult than word order in acquisition of English L2 by Nepali speakers. Furthermore, the results also show that subject-verb agreement is persistently difficult for the proficient learners too. In contrast, all the participants show good performance in word order which shows that there is not any correlation between proficiency score and word order. It also reveals that participants' knowledge of word order is not related to proficiency score since all participants whether they have high proficiency score or not, are already good enough. On the other hand, a weak correlation between subject-verb agreement and proficiency scores suggests that the performance of the participants on agreement remains constant though proficiency scores increases.

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1. Introduction

In the field of second language acquisition (SLA), a number of studies have been concerned to examine and explain what linguistic features and constructions are easy or difficult to acquire in second language (L2). In line with this growing interest among the L2 researchers, the present thesis aims to test the Bottleneck Hypothesis (2006; 2008; 2013) in L2 acquisition of English by Nepali learners. The bottleneck hypothesis as proposed by Roumyana Slabakova (2006; 2008; 2013), predicts that functional morphology is the bottleneck of L2 acquisition and therefore, one of the most difficult phenomena for second language learners. Furthermore, acquisition of syntax, semantics and pragmatics flows smoothly (Slabakova, 2006, 2008, 2013).

In relation to the Bottleneck Hypothesis, two types of grammatical constructions are included in the present study: subject-verb agreement and word order. Subject-verb agreement is used to test the knowledge about functional morphology while word order is used to test the knowledge about syntax. The two grammatical constructions are selected based on typological variation between Nepali and English. In addition, the constructions demonstrate a considerable amount of mismatch between the two languages.

Regarding subject-verb agreement, both languages exhibit overt agreement system between subject and verb. However, the agreement system differs in the way of using inflections. English verbs inflect to show contrasts for number, person and tense only. On the other hand, in addition to number, person and tense, Nepali verbs inflect to show contrast for gender and honorifics as well (Bal, 2004; Simkhada, 2012). Consequently, the inflection system in Nepali is rich and fairly complicated compared to English creating considerable mismatch between the two languages. For example, English verbs in present tense are marked with the suffix – *e(s)* when the subject is 3rd person singular while the corresponding form of verb in Nepali can be realized by numerous suffixes – *-ts^hɔ̃*, *-ts^hin*, *-ts^he*, *ts^hɔ̃n* etc. (see section 3.1 in detail).

With reference to word order, Nepali is a verb final language. The basic word order in Nepali is SOV(Aux). Structurally, the verb usually occurs after the object and can never be moved to another position. In contrast, verbs in English usually occur after the subject. Thus, an English sentence follows the basic word order as SVO (subject-verb-object) which is quite rigid and

inflexible. In this regard, the word order patterns between these two languages show contrast in relation to the placement of the verb, which can be seen in the following examples.

(1) *Basic word order in English*

She	teaches	grammar.
S	V	O

(2) *Basic word order in Nepali*

uni	bjakôrôn	paḍhaũ-tshn.
She	grammar	teach-es.
S	O	V

“She teaches grammar.”

The study is restricted to only within two grammatical phenomena: functional morphology and syntax. Therefore, in this thesis, I compare the performance of Nepali learners between functional morphology and syntax to examine whether functional morphology or syntax is the more difficult part in L2 acquisition of English. With reference to this, the hypothesis posed by the current thesis is that Nepali learners of English are weaker in the acquisition of functional morphology than syntax. In order to test the hypothesis, the thesis includes the following research questions.

1. Do Nepali learners of English have problems with subject-verb agreement?
2. Does word order difference between two languages cause any difficulties in the acquisition of English word order by Nepali learners?
3. Is subject-verb agreement (functional morphology) more difficult than word order (syntax) in L2 acquisition?

Research question 1 refers to whether Nepali learners of L2 English display any evidence of difficulty in acquisition of subject-verb agreement. In addition, it also looks at whether agreement with singular subject or plural subject is more difficult. It is expected that Nepali learners of English have problems with subject-verb agreement. The expectation is made

based on the previous findings related to agreement (see Jensen, 2016; Slabakova and Gajdos, 2008; Wee et.al, 2010; Urano, 2008).

Research question 2 is related to syntax. It tests whether Nepali learners of English as L2 have any difficulties regarding the verb placement. Several evidences of L1 transfer in word order are reported in findings of previous studies (see; Meisel, Clahsen & Pienneman, 1981; Gass and Selinker, 2001; Westergaard, 2003; Mede, et al. 2014)). It is expected that the Nepali learners of English as L2 might have some difficulties in the acquisition of word order in English because of their structural differences.

Research question 3 is set as the main research question of the present study. In other words, research question 3 aims to test bottleneck hypothesis. Thus, in order to test research question 3, the findings of the research question 1 (functional morphology) and 2 (syntax) will be compared to find out whether subject verb agreement is more difficult than word order in L2 acquisition.

The thesis is built and developed based on the study of Jensen (2016). In her study, Jensen (2016) examines Norwegian L1 speakers' knowledge of syntax and morphology in English L2 to test whether functional morphology is more difficult than narrow syntax (see chapter 4 in detail). The main findings reported in her study show that subject-verb agreement is significantly more difficult than verb movement in acquisition of English L2 by Norwegian speakers. Furthermore, the results also show that subject-verb agreement is persistently difficult, not only for the speakers at the lower proficiency levels but also for the speakers at the higher proficiency levels. In addition, regarding verb movement, a developmental jump in the performance of the participants from the intermediate stage to the high intermediate stage has been reported while acquisition of subject-verb agreement is developed slowly.

The present study resembles the work of Jensen (2016) in many ways. Both studies include similar constructions (i.e. subject-verb agreement and word order). The major similarity between these two studies lies at the centre of their main research question. Accordingly, both of the studies aim to test bottleneck hypothesis. However, the present study differs from the way in which the constructions (agreement and word order) are treated differently in different language systems. In this connection, Norwegian and Nepali are completely distinct based on the use of agreement and word order.

The experiment was carried out based on an online survey method, Survey Gizmo, which included an acceptability judgement test, a proficiency test and a background questionnaire. The acceptability judgement test is the most widely used quantitative method in syntactic research which is based on speakers' intuitions about the well-formedness of sentences (Dąbrowska, 2010). The acceptability judgement test is one of the several types of tests that require participants to judge whether particular sentences are possible or not in either their native language or a language being learnt. A total of 46 test items were included in acceptability judgement test out of which 10 were fillers. In addition, the experiment included a subset of a Standardized Oxford Proficiency test which contains 40 multiple choice test items in order to examine the proficiency level of the participants. The experiment included a total of 48 participants between the age of 15 and 18 (see section 6.1.3). The experiment was conducted at a private English medium school in Kathmandu valley, Nepal.

The thesis investigates Nepali L1 speakers' knowledge of syntax and morphology in English L2 to test whether functional morphology is more difficult than narrow syntax. The main findings reported in the study show that subject-verb agreement is significantly more difficult than word order in acquisition of English L2 by Nepali speakers.

The thesis has been structured in 9 chapters altogether. The first chapter has come up with the general overview of the overall thesis. Chapter 2 presents basic theoretical concepts on the basis of research objectives to provide an insight for the further analysis and discussion of the empirical field work data. It provides the theoretical perspectives and frameworks which is the basis and the guideline for analysis and discussion. Chapter 3 provides information on the constructions (subject-verb agreement and word order). It discusses how these two constructions are treated differently in two different languages (English and Nepali). Similarly, chapter 4 discusses some related research findings carried out in the past. Further, chapter 5 gives an outline of the research questions and predictions to which the thesis is constructed and developed. Chapter 6 focuses on the research methodology which includes experiment design, the procedure of data collection, test items and participants. Chapter 7 deals with the results of the experiment. The results are further discussed in chapter 8. Finally, a conclusion of the study as a whole has been provided in chapter 9.

2. Theoretical background

The chapter discusses the theoretical background on second language acquisition in which the present thesis is built. Accordingly, the chapter begins with introductory information on second language acquisition. Furthermore, the nature and process of language transfer from previously acquired languages to subsequent languages are discussed in 2.1.2. Finally, the sub-chapter 2.2 discusses the bottleneck hypothesis (Slabakova, 2006, 2008, 2013).

2.1. Second language acquisition:

Second Language Acquisition (SLA) is the process of learning a new language in addition to a learner's first language (L1), which is usually described as the learner's native language or mother tongue. The additional language that a second language learner learns can be their second, third or fourth language (Gass, 2003). Regarding the process of language acquisition, various researchers argue that L1 acquisition is almost invariably accomplished by children within their first few years of life span in a natural setting, while L2 can take place at any time following the onset of first language acquisition into old age, often in a formal setting. Thus, the process of L1 and L2 acquisition are distinguished in many ways. L2 learners are cognitively mature for having knowledge of at least one language and they may be motivated to learn an L2 for different purposes. One of the fundamental differences between these two types of acquisition is in ultimate attainment between L1 and L2 speakers (Cook, 2002). Most second language learners do not achieve the same level of proficiency in L2 as they do in their L1; regardless of sufficient exposure to L2. Thus, Second language acquisition and first language acquisition are different since they follow distinct acquisition process. Consequently, second language acquisition is treated as an independent research field in language and linguistics (Cook, 2010).

2.1.1. Universal grammar (UG)

Prior to the introduction of generative grammar, theoretical approaches to language acquisition relied heavily upon behaviorism model. The behaviorism model viewed language learning as a habit formation process. The interpretation of language acquisition put forward by behaviorism was seriously criticized after the birth of Chomskyan generative linguistics (also known as innatist model). Within the framework of generative linguistics, Chomsky

(1965) argued that children are born with a specific and innate capacity to learn language, also known as Universal Grammar. He further proposes that L1 acquisition is constrained by Universal Grammar (UG). UG consists of invariant principles and parameters. Invariant principles are common to all languages while parameters are language-specific (i.e. they are varied from language to language) with a limited number of settings or values. These values allow for cross-linguistic variation. So UG allows L1 learners to master grammars beyond exposed input. Accordingly, all human languages are constructed on the same abstract representation and that is why all normal children acquire their native languages with the same accuracy. In line with this, Guasti (2002) argues that all L1 learners achieve the same competence in a limited amount of time despite the fact that the linguistic input can be greatly varied that a child is exposed to.

UG is usually defined as the system of categories, mechanisms and constraints shared by all human languages which are considered to be innate (O'Grady et al., 1996; Chomsky, 1986; Pesetsky, 1999). To account for language acquisition, UG is assumed to be an innate biologically endowed language faculty (Chomsky 1965, 1981b; Pinker 1994). Furthermore, Chomsky (1965) claims that the human mind is well equipped with the Language Acquisition Device (henceforth, LAD), which is an innate, language-specific module effectively programmed to learn language.

In the process of L1 acquisition, it is agreed that there is a mismatch between the linguistic input and output which gives rise to the *logical problem of language acquisition*, which is also referred to as *poverty of stimulus*. In response to the logical problem of language acquisition, Chomsky proposes Universal Grammar to account for the initial state in first language acquisition. The term *initial state* is applied in linguistics to describe the unconscious and potential knowledge of a language without learning and input of the language.

2.1.2. Language transfer

L1 acquisition is developed through universal grammar. However, on the other hand, knowledge of L1 also serves as a basis for learning the second language. Therefore, the knowledge of L1 may either facilitate or hinder the process of L2 learning. In line with this, Language transfer is considered to be a major process in L2 acquisition. However, the role of

transfer in second language acquisition has been widely debated and as a result, various theories have been emerged in the field of second language research.

In the process of learning a second language, the learners apply some rules from their previously learned languages onto the target language which is also known as learning transfer (James, 2007). Lado (1957) claimed that the level of similarity between languages decides the level of difficulty in acquiring certain aspects of a language. Selinker (1983) broadly divided the transfer into two types: positive and negative transfer. The L1 background of the learners plays key role in L2 learning. Based on the similarities and differences between learners' native language and target language, the learning task in L2 can be either facilitative or a hindrance. Odlin (2003) views that similarity between transferable representations in the learners' L1 and L2 show the way to positive transfer, whereas differences lead to negative transfer (Odlin, 2003: 348). Positive transfer makes leaning easier with facilitation while negative transfer interferes in L2 learning and makes it difficult. In recent years, the role of L1 transfer has also been interpreted as the learners' strategies in L2 learning (e.g. Mu & Carrington, 2007; Wolfersberger, 2003).

In recent years, language transfer has been studied within a cognitive approach to language learning, which emphasizes the cognitive role of the language learner. Transfer is not just the carryover of previous language habits to the subsequent learning; instead Selinker (1983) argues that a major cognitive process where L1 transfer plays an important role in the formation and development of inter-language in L2 learning. Selinker (1983) used the term '*inter-language*' to refer to the L2 learner's language; a system between the learner's L1 and L2. Further, linguistic transfer is not always the case from L1 to L2; instead, an L2 can also influence the learner's L1. It means in the process of L2 acquisition, the learners have two linguistic systems (i.e. L1 and L2) that can potentially influence each other (Cenoz et al., 2001b). However, most of the research on SLA has been mainly focused on the potential transfer from L1 to L2 only (Cenoz et al., 2001b; Mayo, 2012).

Studies on language transfer in SLA were predominantly carried out in the field of syntax (Gass, 1996). Most of the studies in the field of syntax are concerned to look at the influence of L1 in L2 word order due the structural differences between the languages (e.g. Fathman and LoCoco, 1989; Odlin, 1990; Rutherford, 1983; Zobl, 1986a; 1986b). Furthermore, there are not any uniform views as to whether basic word order of L1 can be transferred to L2

where two languages are structurally different. In line with this, Rutherford (1983) found no evidence of such transfer in Japanese learners of English despite the languages are structurally different (i.e., Japanese follows SOV order, while English an SVO). However, such transfer can be possible in case when a language makes use of more than one basic word order (Zobl, 1986; Plunkett and Westergaard, 2011). Others suggest that the initial word order acquisition is guided by universal principles (Tomlin, 1986; Klein and Perdue, 1993).

A number of studies in SLA suggest that L1 transfer exists during L2 acquisition. However, to what extent does it occur and whether it facilitates or interferes in SLA is the most debated question among the researchers. With reference to this assumption, the extent of L1 transfer is based on the nature of the initial state in L2 acquisition. According to White (2003:58) 'initial state' is the unconscious linguistic knowledge that the L2 learner starts out with in advance of the L2 input and/or to refer to characteristics of the earliest grammar (White, 2003:58). Hence, L1 transfer has a different impact on L2 acquisition in different hypotheses. Accordingly, full transfer full access (FT/FA) hypothesis, the minimal trees hypothesis, and the valueless features hypothesis are distinguished.

In contrast to the views put forward by other researchers who believe for less than total involvement of L1 during L2 acquisition, Schwartz and Sprouse (1994, 1996) proposed *The Full Transfer/Full Access (FT/FA) hypothesis* which claims that the initial state in L2 acquisition is the entire L1 grammar (excluding specific lexical items). In this regard, when the L1 grammar is unable to accommodate properties of L2 input, some changes in L1 grammar can take place. To elaborate, during the SLA process, L2 learners at first assume L1 and L2 grammar is same. But when L1 grammar fails to accommodate L2, L2 learners restructure the L1 grammar with exposure to L2 input. In this process, L2 learners access to UG during L2 development when inter-language is needed to restructure.

The Minimal Trees Hypothesis proposed by Vainikka and Young-Scholten (1996) also argues that the initial state is a grammar, with early representations based on the L1 as similar to *FT/FA Hypothesis*. However, unlike *The Full Transfer/Full access Hypothesis*, *The Minimal Trees Hypothesis* claims that only parts of L1 grammars are included in the initial state. To specify, only lexical categories and their linear orientation are transferred from L1 to L2 and the transfer does not include functional categories. It means, L1 transfer into L2 acquisition is restricted to lexical projection only, excluding functional categories. In addition, functional

categories are available via UG in *The Minimal Trees Hypothesis*. When L2 learners are exposed to L2 input, such functional categories are emerged step by step to develop inter-language.

Regarding the inter-language initial state, the *Valueless Feature Hypothesis* proposed by Eubank (1993; 1994; 1996) also makes a claim similar to the *Full Transfer/Full Access Hypothesis* and the *Minimal Trees Hypothesis* as the initial state is a grammar. However, in particular, *The Valueless Feature Hypothesis* argues for 'weak' transfer, maintaining that the L1 grammar largely- but not entirely- determines the inter-language initial state. In contrast to the *Minimal Trees Hypothesis*, the *Valueless Feature Hypothesis* claims that the earliest form of inter-language includes both L1 lexical and functional categories. However, the Hypothesis further argues that L1 functional categories are available in inter-language but not their feature values. In line with this, the *Weak Features Hypothesis* of Eubank (1994) claims that lexical and functional categories are transferred, but the feature strength of L1 functional categories does not. Features are valueless or 'inert' in the initial state. The Hypothesis assumes the feature values as neither weak nor strong. These L2 feature strengths will be acquired during the L2 acquisition (White, 2003:79).

In recent SLA research on variable use of morphology among L2 learners, two divergent views are argued on the issue of the predominance of syntax or morphology in the developmental sequence of inter-language grammars (Sundquist, 2005). Accordingly, the first view assumes that there is a close relationship between acquisitions of target-like inflection morphology and syntactic structure while, on the other hand, the second view claims in opposition as abstract morpho-syntactic features may be represented in L2 grammar despite the absence of overt morphology (White, 2003). The first view gets support from the *Minimal Trees Hypothesis* (Vainikka and Young-Scholten, 1994; 1996; 1998) and the *Valueless Feature Hypothesis* (Eubank, 1993; 1994; 1996) which claims that some kind of impairment in syntactic properties such as feature strength values or limited access to functional categories causes variability in use of inflectional morphology in L2 acquisition. The Impairment approach views that learners' lack of success in acquisition of L2 inflectional morphology is the result of deficit grammatical knowledge of the target language (Eubank, 1993/1994, Meisel, 1997; Vainikka & YoungScholten, 1994). The impairment view further claims that functional features, for example, T and Agr are not available to L2 learners; consequently, it becomes almost impossible to achieve target-like performance of inflectional

morphology in L2 acquisition. In this regard, Eubank (1994) argues that the absence of tense and agreement inflections in L2 learners' speech contributes to some type of deficit in the learner's L2 competence.

The second view, on the other hand argues that the learners' competence is not impaired. Unlike first view, it further claims that learners have access to L2 functional features such as T and Agr, however, the variability in the use of inflectional morphology results from processing problems (Haznedar & Schwartz, 1997; Haznedar, 2001; Ionin & Wexler, 2002; Lardiere, 1998; Prévost & White, 2000). This view supports the *Missing Surface Inflection Hypothesis* (MSIH) which claims that learners show difficulties in mapping between tense features and the appropriate surface forms what Lardiere (2000) calls a '*Mapping Problem*'. According to Lardiere (2000), in L2 acquisition, the development of inflectional morpheme and the syntactic knowledge of formal features are dissociated and therefore, learners may acquire T and Agr features first followed by the development of verb morphology. In line with these claims, supporters of the MSIH posit that functional categories are available in the L2 learners' grammar; however, it is the mapping problems which restrict them from producing the target-like inflectional morpheme. The arguments are based mainly on the assumption that L2 learners acquire abstract syntactic structure early, while the acquisition of target-like inflection is simply missing and lags behind. In other words, the L2 learners are able to produce complex syntactic structure that requires functional features despite the fact that they may show a low rate of tense and agreement inflection.

Regarding the variability in the use of inflectional morphology reported in L2 acquisition, the two contrasting views discussed above is still debatable. To elaborate, whether such morphological variation is led by the first view (i.e. some kinds of impairment in the learners' grammar) or the second view (i.e. processing problem) has been discussed widely in L2 research. On one hand, several studies in L2 acquisition of inflectional morphology report that learners frequently drop verb inflection in spite of being exposed to the target language for a considerable period of time. This suggests that learners' difficulty in using inflectional morphology is caused by grammatical impairment and incomplete knowledge of L2 grammar. In contrast, on the other hand, other studies have also reported that learners can produce complex syntactic structures which require knowledge of functional features. This suggests that functional features are available to learners, but mapping problems prevent them from performing at target-like levels.

2.2. Bottleneck Hypothesis

In recent years, the growing interest in the field of second language acquisition (SLA) is concerned to examine and explain what linguistic features and constructions are easy or difficult to acquire in second language (L2). With this respect, White (2003) points out two different views with reference to syntax-morphology relationship: labeling as *morphology before syntax* and *syntax before morphology* (P. 182-184). On the *morphology before syntax* view, as supported by Clahsen, Penke and Parodi (1993; 1994); Radford (1990) argues that the lexical acquisition of functional morphology actually derives the acquisition of functional categories. In contrast to this older view in relation to syntax-morphology relationship, Roumyana Slabakova (2006; 2008; 2013) proposes The Bottleneck Hypothesis which aims to identify the easier and harder linguistics properties to acquire in SLA. Properties of language, relating to functional morphology, are language specific (Slabakova, 2014). Accordingly, Slabakova (2013) argues that inflectional morphology reflects syntactic and semantic differences between languages. It means that syntactic and semantic differences between the languages are dependent on the features that are carried by the inflectional morphemes. Comparing the findings of functional morphology, syntax, semantics and pragmatics in L2 acquisition, Slabakova (2013) argues that functional morphology is the bottleneck of L2 acquisition, and therefore, one of the most difficult phenomena for the second language learners. Further, the acquisition of syntax, semantics and pragmatics flows smoothly (Slabakova, 2006; 2008; 2013) supporting the notion of syntax before morphology.

The *syntax-before-morphology* view argues that the learners can still be engaged in the syntactic tasks related to the inflectional morphology to which the L2 learners do not show accurate performance (White, 2003: 182). With reference to this view, Slabakova (2013) argues that knowledge of narrow syntax comes before the accurate knowledge of functional morphology in production and comprehension of a second language (P.23). In support of this view, several studies in child and adult L2 acquisition have been carried out. White (2003) presented some evidence based on the studies of Haznedar and Schwartz (1997); Haznedar (2001); Ionin and Wexler (2002); Lardiere, (1998a and b). White (2003: 189) summarizes the data of the three studies which measured the accurate production of the verbal inflection such as, 3sg agreement and past tense and various syntactic phenomena related to it, such as overt subjects, nominative case on the subject, and verb staying in VP in obligatory context in English L2. For example, Hazendar (2001) carried out a longitudinal study over 18 months to

examine the acquisition of inflectional system by a Turkish L2 learner of English. Ionin and Wexler (2002) examine the reasons behind omission of verbal inflection in L2 English by L1 Russian children. Lardiere (1998a) carried out a longitudinal study over eight years to examine the fossilization of English L2 tense morphology for an adult native Chinese speaker.

Table 1: the accuracy rate of L2 English functional morphology in obligatory contexts

	3 rd sg agreement on lexical verbs	Past tense	Suppletive forms of be (aux/copula)	Overt subjects	Nom. case	V in VP
Haznedar (2001)	46.5%	25.5%	89%	99%	99.9%	-
Ionin&Wexler (2002)	22%	42%	80.5%	98%	-	100%
Lardiere (1998a,b)	4.5%	34.5%	90%	98%	100%	100%

(Slabakova 2008: 102)

Based on the data in table 1, we can observe that the accuracy rate of syntactic phenomena is higher than the accuracy rate of verbal inflection. To elaborate, the accuracy rate of verbal inflection such as, 3sg agreement and past tense is between 46.5% and 4.5% whereas the accuracy rate of syntactic phenomena related to it like, overt subjects, nom. case and verb staying in VP is above 98%. Although the knowledge of all the linguistics properties are related to the same underlying functional category, IP, and its features, the accuracy rate for syntax is higher and more consistent than the functional morphology (Slabakova, 2013). The data show that acquisition of the syntactic features is easier than functional morphology related to it. Therefore, the data supports the view of *syntax before morphology* arguing against *morphology before syntax* view.

In order to maintain the argument suggested by the Bottleneck Hypothesis, Slabakova (2013) presents several empirical data from experimental studies (e.g. Slabakova & Gajdos, 2008;

Dąbrowska & Street, 2006). To support this view, Slabakova & Gajdos (2008) investigated the L2 acquisition of different form of German copula *sein* ('be') in the present tense. The data show that the acquisition of functional morphology is difficult (see more in chapter 4).

To sum up, The Bottleneck Hypothesis predicts that the functional morphology is the bottleneck in L2 acquisition. The L2 learners have to learn the target language morphology based on their language specific rules and uses; however, on the other hand, meanings come for free since it is universal. The difficulty level of functional morphology is associated with the formal features carried to account for the syntactic and semantic cross-linguistic differences. Such formal features encoded in functional morphology cannot be transferred from the previously acquired languages and therefore, should be lexically learned (Slabakova, 2013: 14). In contrast, the features associated with narrow syntax can be facilitated by the knowledge of previously acquired languages with positive transfer.

3. Constructions

The chapter discusses how two different grammatical constructions (i.e. subject-verb agreement and word order) are realized in two different languages (i.e. English and Nepali). Following this, the chapter has been sub-divided into two in which section 3.1 discusses subject-verb agreement and section 3.2 discusses word order including both English and Nepali.

Subject-verb agreement is used to test the knowledge about functional morphology and word order is used to test the knowledge about syntax. As I discussed in the previous chapters, the thesis aims to examine whether functional morphology is more difficult than narrow syntax for Nepali learners of English. Several researchers (e.g., Westergaard, 2003; Mede et.al, 2014) suggest that the acquisition of English word order as L2 may be challenging for L2 learners. Similarly, several other researchers focus on the challenges faced by L2 learners with respect to subject-verb agreement (e.g., Slabakova and Gajdos, 2008; Wee et. al, 2010; Breiteneder, 2005). Based on these studies, it is assumed that both types of constructions can be problematic for Nepali learners of English as well. Therefore, the thesis first investigates if Nepali as L2 learners of English also exhibits the similar problematic situation as suggested by several researchers above. In addition, the study also examines which construction (i.e. either subject-verb agreement or word order) is more challenging.

Furthermore, the rationale behind choosing Nepali as L2 learner of English greatly based on the structural differences between the Nepali and English. With respect to their typological distance, these two constructions demonstrate considerable variances which are discussed in detail on the following sub-chapters.

3.1. Subject-verb agreement

Agreement is a grammatical phenomenon that exists in many languages (Mallinson & Blake, 1981). Two or more linguistic forms are said to agree when they are alike in gender, number, case, or person. For instance, in both Nepali and English, the subject of a clause must agree in number with the verb. Thus, a singular noun phrase must occur with a singular verb and a plural noun phrase must occur with a plural verb as in (3) and (4).

(3) *English*

- a. The girl walks slowly. (SG)
- b. The girls walk slowly. (PL)

(4) *Nepali*

- a. Tyo keti bistar̄i hid-t^he. (SG)
The girl slowly walk- be NPST.3SG
'The girl walks slowly.'
- b. Ti ketiharu bistar̄i hid-t^h̄n. (PL)
The girls slowly walk- be NPST.3PL
'The girls walk slowly.'

Thus, the way how the subject shows agreement with the verb in a clause may vary between languages. Consequently, although both Nepali and English show subject-verb agreement, the way of realizing it differs from each other.

3.1.1. Subject-verb agreement in Nepali

Regarding subject-verb agreement, Nepali shows an overt agreement between subject and verb as English does. To discuss in detail, both of the languages show overt agreement, however the differences occur in the inflections they use. For example, present simple verb in English is marked with the suffix –e(s) if the subject is 3rd person singular whereas it is marked with various suffixes (e.g. -t^h̄, -t^he, -t^hin, -t^h̄n, etc.) in Nepali as illustrated in the following sentences.

- (5) (a) Sandra ramr̄ri nats- t^hin.
Sandra well dance-s
"Sandra dances well."

(b) Sandra ramr̥ri nats- ts^he.
 Sandra well dance-s
 “Sandra dances well.”

(6) (a) John ramr̥ri nats- ts^ḣn.
 John well dance-s.
 “John dances well.”

(b) John ramr̥ri nats- ts^ḣ.
 John well dance-s.
 “John dances well.”

In the examples above, the inflections (*-ts^hin* and *-ts^he*) as in sentences (5a and 5b) and the inflections (*-ts^ḣn* and *-ts^ḣ*) as in sentences (6a and 6b) show the contrast in relation to honorifics. Furthermore, the sentences as in (5) and (6) show the contrast based on gender.

Verbs in Nepali inflect to show contrasts for the person (*1st, 2nd and 3rd persons*), numbers (*singular and plural*), gender (*masculine and feminine*) of a subject in third person singular and tense (*present, past and future*) (Bal, 2004). In the following text, I will present the verb inflection in relation to person, number and gender, honorifics and tense respectively using main declarative clauses with lexical verb.

Nepali verb inflectional system (present tense)

1st person

(7) ṁ b^ḣkundo k^heI-ts^hu. (SG)
 I football play-be NPST.1SG
 ‘I play football.’

(8) hami b^ḣkundo k^heI-ts^ḣũ. (PL)
 We football play-be NPST.1PL
 ‘We play football.’

2nd person

(9) timi b^hɔkundo k^hel-ts^hɔu. (SG)
You football play-be NPST.2SG
'You play football.'

(10) timihɔru b^hɔkundo k^hel-ts^hɔu. (PL)
You football play-be NPST.2PL
'You play football.'

3rd person

(11) u b^hɔkundo k^hel-ts^hɔ. (SG)
He football play-be NPST.3SG.MASC
'He plays football.'

(12) uni b^hɔkundo k^hel-ts^hin. (SG)
She football play-be NPST.3SG.FEM
'She plays football.'

(13) tjo b^hɔkundo k^hel-ts^hɔ. (SG)
It football play-be NPST.1SG.NEUT
'It plays football.'

(14) tinihɔru b^hɔkundo k^hel-ts^hɔn. (PL)
They football play-be NPST.3PL
'They play football.'

In Nepali, person is broadly sub-divided into three (i.e. *1st person*, *2nd person* and *3rd person*), number into two (i.e. *Singular and Plural*) and gender into three (i.e. *Masculine*, *Feminine and Neuter*). In the examples above, verbs take different inflections showing agreement with person, number and gender. *2nd person* does not distinguish the number (i.e. it can be both singular and plural) and therefore, uses the same verbal inflection *-ts^hɔu* as in (9) and (10). Further, *3rd person* masculine and neuter do not show any distinction since both use the same

verbal inflection *-ts^h∂* as in (11) and (13). From the examples above, it is clear that Nepali displays numerous inflections such as *-ts^h∂*, *-ts^hin*, *-ts^he* etc. to represent 3rd person singular verb. The verbs in the examples are inflected agreeing with the subject in person and number. It can be further illustrated in the following table.

Table 2: Nepali verb inflectional system using base form *k^hel-* ‘play’

Person	Number		Gender		
	<i>Singular</i>	<i>Plural</i>	<i>Masculine</i>	<i>Feminine</i>	<i>Neuter</i>
1st	m∂ k ^h el- ts ^h u ‘I play.’	hami k ^h el-ts ^h ∂ũ ‘We play.’			
2 nd	timi k ^h el-ts ^h ∂u ‘you play.’	timi-h∂ru k ^h el-ts ^h ∂u ‘you play.’			
3 rd	u k ^h el-ts ^h ∂ ‘He plays.’ uni k ^h el-ts ^h in ‘She plays.’ tyo k ^h el-ts ^h ∂ ‘It plays.’	tinih∂ru k ^h el-ts ^h ∂n ‘They play.’	u k ^h el-ts ^h ∂ ‘He plays.’	uni k ^h el-ts ^h in ‘She plays.’	tyo k ^h el-ts ^h ∂ ‘It plays.’

In addition, the verbal inflections or verbal inflectional suffixes indicate that there are at least three levels of honorifics reflected in Nepali (Bal, 2004). Thus, Nepali verbs are also inflected to show the grades of honorific in 2nd and 3rd person. There is no particular honorific marker but the hierarchy is maintained at the lexical level (Prasain, 2011). Clark (1963) distinguishes three honorific grades based on the three 2nd person pronouns which are categorized as low grade honorific (LGH), medium grade honorific (MGH) and high grade honorific (HGH) as in (15-17).

- (15) t̃ b^h∂kundo k^hel-ts^h∂s. (SG)
He football play-be NPST.3SG.MASC
‘He plays football.’

(16) timĩ bʰɔkundo kʰel-tsȟɔ. (SG)
 You football play-be NPST.2SG.MASC
 ‘You play football.’

(17) ťɔp̌ai bʰɔkundo kʰel-nu-huntsʰɔ. (SG)
 You football play-be NPST.3SG.MASC
 ‘You play football.’

Furthermore, honorifics do not show any contrast in relation to number since the same inflections are used to indicate both numbers (*singular and plural*). The suffix *-ȟɔru* indicates as plural marker in Nepali. Examples (18) and (19) are based on 2nd person while examples (20) and (21) are related to 3rd person respectively. 1st person does not have honorifics form in Nepali.

2nd person

(18) ȟɔdzur bʰɔkundo kʰel-nu-huntsʰɔ. (SG)
 You football play-be NPST.2SG.
 ‘You play football.’

(19) ȟɔdzur-ȟɔru bʰɔkundo kʰel-nu-huntsʰɔ. (PL)
 You football play-be NPST.2PL.
 ‘You play football.’

3rd person

(20) uȟɔ bʰɔkundo kʰel-nu-huntsʰɔ. (SG)
 He football play-be NPST.3SG.MASC
 ‘He plays football.’

(21) uȟɔ ȟɔru bʰɔkundo kʰel-nu-huntsʰɔ. (PL)
 They football play-be NPST.3PL.MASC
 ‘They play football.’

Finally, verbs are inflected to show contrast for the tense as well. In the following examples, different suffixes (*-ts^hu*, *-t^h ě* and *-nets^hu*) are attached to the verb stem (*k^hel-*) to show contrast for present, past and future tenses respectively as in (22-24).

(22) m̄ b^h̄kundo k^hel-ts^hu. (Present Tense)
 I football play-be NPST.1SG
 ‘I play football.’

(23) m̄ b^h̄kundo k^hel-t^h ě. (Past Tense)
 I football play-be NPST.1SG
 ‘I played football.’

(24) m̄ b^h̄kundo k^hel-ne-ts^hu. (Future Tense)
 I football play-be NPST.1SG
 ‘I will play football.’

3.1.2. Subject-verb agreement in English

The verb inflectional system in English is quite simple. English verbal agreement is commonly described as ‘*easy*,’ ‘*simple*,’ ‘*transparent*,’ and ‘*straightforward*’ (Krashen, 1982:17). Despite its apparent simplicity, it is tremendously difficult for second language learners to use the third person singular suffix accurately. English lexical verbs are just inflected for tense and only in the present tense do verbs mark agreement with the 3rd person singular. Verbs in English agree with the number and person features associated to subject as the English verbs receive the suffix *-(e)s* for 3rd person singular subject in present tense as shown in the following examples:

English verb inflectional system (present tense)

1st person

(25) I play football. (SG)

(26) We play football. (PL)

2nd person

(27) You play football. (SG)

(28) You play football. (PL)

3rd person

(29) He/she/it play-s football. (SG)

(30) They play football. (PL)

Table 3: English verb inflectional system using base form - 'play'

Person	Number		Tense		
	<i>Singular</i>	<i>Plural</i>	<i>Present</i>	<i>Past</i>	<i>Future</i>
1 st	I play	We play	I play	I played	I will play
2 nd	You play	You play	You play	You played	You will play
3 rd	He/she/it plays	They play	He/she/it plays They play	He/she/it played They played	He/she/it played They played

This is in contrast to Nepali where most verbs have verbal inflection (see section 3.1.1.). In addition, unlike Nepali, English verbs do not inflect for gender.

Based on the above discussion, it can be concluded that subject-verb agreement works differently in English and Nepali. Nepali allows rich verb inflectional system compared to English. Consequently, only the 3rd person singular verb in present tense is inflected in English. However, All Nepali verbs are inflected for person, number, gender and tense.

3.2. Word order

In the present study, it is proposed that Nepali learners might experience certain difficulties while acquiring the word order patterns (verb placement) in English that causes transfer errors because of the differences in the syntactic structure of the two languages. Therefore, I present an outline of the word order pattern in both languages (English and Nepali) briefly. Here, the focus is given to VO/OV phenomena in relation to placement of verb only.

3.2.1. Word order in Nepali

The verb usually occurs at the end of the sentence in Nepali. Therefore, the basic word order is SOV (subject-object-verb). Nepali is a verb final language and the verb cannot be moved to another position. The sentence always starts with subject followed by objects (direct or indirect objects, time or place adverbs, etc.). This can be illustrated in the examples below.

- (31) Tyo sano ketole ek gilasa dud^h piuts^h∅. (Direct Object)
The little boy-case a glass milk drinks.
'The little boy drinks a glass of milk.'
- (32) Tyo sano ketole tyo bud^ho manis^lai ek gilasa dud^h dijo. (Indirect Object)
The little boy-case the old man-case a glass milk gave.
'The little boy gave a glass of milk to the old man.'
- (33) Tyo sano keto 12 baje aipugts^h∅. (Time Adverbial)
The little boy 12 o'clock arrives.
'The little boy arrives at 12 o'clock.'
- (34) M∅ euta hotel ma b∅sts^hu. (Place Adverbial)
I a hotel -in live.
'I live in a hotel.'

Nepali follows the basic word order as SOV pattern. However, if a sentence includes both lexical and auxiliary verb, then the lexical verb always precedes the auxiliary verb in the sentence final position following the word order pattern as SOVAux. Since the study is

concerned with subject-verb agreement in simple present tense only, therefore, I discuss the agreement phenomena including only lexical verbs.

3.2.2. Word order in English

In contrast, the verbs usually occur after the subject in English. Thus, an English sentence follows the basic word order as SVO (subject-verb-object). The basic word order in English is quite rigid and inflexible as in the example (35) where '*The dog*' stands for subject, '*bites*' is verb and '*a man*' is object respectively. Native speakers use various cues to determine correct word order in a given language (Gass & Selinker, 2001: 222). If the order is changed as in (36), the sentence does not give a plausible meaning.

(35) The dog bites a man.

(36) A man bites the dog.

Based on language typology, the arrangement of words in a string determines the syntactical pattern of a language. In this regard, English and Nepali follow different word orders as SVO and SOV pattern in terms of syntax. Thus, Nepali learners of English already have a linguistic mapping of their first language. In line with this fact, the thesis aims to investigate whether the Nepali learners of English exhibit any L1 influence to their L2: either facilitative or hindrance.

4. Previous studies

In this chapter, I discuss some relevant works that are previously carried out in the field of L2 acquisition. The review of the related works is related to subject-verb agreement and word order.

Slabakova and Gajdos (2008) carried out an experimental study to investigate the L2 acquisition of different forms of German copula *sein* ('be') in the present tense. The study was experimented on university students of German with their L1 English including twenty-four beginner and eighteen intermediate learners. The participants were tested based on the written test. The proficiency level of participants was established according to the number of hours of classroom instruction they had. With this respect, the beginner had exposure of 40 hours of classroom instruction and the intermediate learners had 140 hours.

The result drawn by the experiment shows that the error rate is higher in choosing DP subject for both beginner and intermediate learners compared to pronominal subject. In addition, within the subjects with full DPs, the error rate for intermediate learners is higher than the beginners although they were exposed to more classroom instruction in German. Based on the results discussed above, the study carried out by Slabakova and Gajdos (2008) shows that the acquisition of functional morphology is difficult.

Wee et.al (2010) conducted research to identify and describe the written verb-form errors found in Malaysian learners of English. The study included a total of 39 second year undergraduate students from a public university in Malaysia. The study employed essay writing test as the tool for data elicitation. For this, the participants were given the reading materials on a specific topic during the test and were asked to write an essay on the given topic in about 350 words within a time limit of one and half hours. The data collected were identified and categorized into four categories as (a) omission, (b) addition, (c) misformation and (d) ordering. The data then, analyzed to determine the types and frequency of errors. The result shows that omission error had the highest percentage and frequencies of verb-form errors followed by addition, misformation and ordering respectively. Based on these results, the study shows that subject-verb agreement with respect to the use of 3rd person singular –s is the most difficult part since the participants make more errors including omission and addition of –s.

Furthermore, similar types of errors have also been reported with respect to subject-verb agreement in L2 acquisition (see e.g. Sridhar, 1996; Sand, 1999a; Breiteneder, 2005). In the study of Sand (1999a: 133-140), numerous examples of both missing and hypercorrect uses of 3rd person singular –s have been found.

Urano (2008) carried out a corpus based study, focusing on the difficulty in subject-verb agreement in L2 English by Japanese learners. In order to do this, only the agreement errors made by the speakers were extracted from the corpus. The analysis procedure included a total of 347 agreement errors. The data show that there were mainly two types of errors (i.e. omission errors and over-suppliance errors). Among the subject-verb agreement errors in the corpus, errors in relation to lexical verbs were higher than auxiliary verbs.

Looking at the over-suppliance errors only, the data shows that the rate of errors in the use of lexical verb is higher when the subject is 3rd person plural. Based on Urano's (2008) result, it can be argued that not only the 3rd person singular but 3rd person plural subjects are also the difficult part in subject-verb agreement in second language acquisition. Similar type of result has also been reported in the study of White (2001) where 31 cases of over-suppliance errors were reported involving 3rd person plural subjects out of 32.

Westergaard (2003) examines the acquisition of basic SVO English word order by child learners of verb second (V2) language. The study was experimented on approximately 100 Norwegian school children aged from 7 to 12. The study focuses on the extent of language transfer from the L1. The results from the experiment showed that there is considerable transfer of Norwegian word order to English in all age groups (Westergaard, 2003: 86) and in the process of learning English word order, the children are required to 'unlearn' the V2 rule that they acquired during their first language acquisition. The study identifies that input cues are necessary to restructure children's internalized grammar in L2 acquisition of English word order based on a cue-based approach to second language acquisition. In addition, it is argued that the frequency of these cues is responsible for the order of acquisition.

A similar study has been carried out by Bentzen (2013) to examine the cross-linguistic influence and structural overlap affecting English verb placement in bilingual acquisition. The study included young monolingual and bilingual children. In her study Bentzen (2013) reported that the study collected real data from a two year old balanced Norwegian – English

bilingual girl. The data reports that she has transferred the Norwegian V2 phenomena into English. Thus, the results suggest that if two languages exhibit superficial structural overlap, (i.e. Norwegian and English) it facilitates the cross-linguistic influence in bilingual language acquisition.

In their research, Mede et.al (2014) observed transfer effects of Turkish (L1) learners of English (L2) with respect to the acquisition of word order (verb placement). The study included a total of 19 beginner level participants from the preparatory program of a private university in Istanbul, Turkey between the age of 17 and 26. The study employed grammaticality judgement task and picture description task in interval of a week for the data collection procedure. The results revealed significant evidences of syntactic transfer from Turkish (L1) to English (L2) as a result of difference in word order between two languages.

Jensen (2016) examines Norwegian L1 speakers' knowledge of syntax and morphology in English L2 to test whether functional morphology is more difficult than narrow syntax (i.e. Bottleneck Hypothesis). In order to test the hypothesis, the following research questions were posed.

- Is morphology more difficult than narrow syntax in L2 acquisition?
- Is morphology a more persistent problem than narrow syntax?
- Which of the syntactic and morphological conditions are more difficult?

In order to test research questions 1 and 2, she compared acquisition of subject-verb agreement and verb movement. In addition, research question 3 aims to identify the more challenging morphological and syntactic conditions. The research question 3 has been tested by comparing the participants' judgements of the different morphological and syntactic constructions. For this, the constructions: subject-verb agreement and verb movement were chosen because of the mismatches between English and Norwegian. Regarding agreement, there is no overt agreement morphology in Norwegian, while verb with 3rd person singular subject in present tense is marked with the suffix- e(s) in English. Furthermore, Norwegian is a V2 (verb second) language, which means that the verb always occurs in the second position of a declarative main clause, while English is an SVO language (subject-verb-object), which means that the verb stays in VP. Examples of the mismatches are provided in (37) and (38):

(37) *Subject-verb agreement*

- | | |
|-----------------------------|-------------|
| a. Mary drinks wine | [English] |
| b. Mary and John drink wine | [English] |
| c. Mari drikker vin | [Norwegian] |
| Mari drinks wine | |
| ‘Mary drinks wine’ | |
| d. Mari og Jon drikker vin | [Norwegian] |
| Mari and Jon drink wine | |
| ‘Mari and Jon drink wine’ | |

(38) *Verb movement*

- | | |
|------------------------------|-------------|
| a. Yesterday Mary drank wine | [English] |
| b. I går drakk Mari vin | [Norwegian] |
| Yesterday drank Mari wine | |
| ‘Yesterday Mari drank wine’ | |

[Jensen, 2016: 6]

A total of 85 sentences were included in the study, out of which 13 were fillers. The test sentences included six different types of sentences: non-subject-initial declaratives with lexical verbs and auxiliary verbs, and subject-initial declaratives with 3rd person plural and singular subjects, as well as long and short distance agreement. The non-subject-initial declaratives test verb movement, i.e. syntax, and the subject-initial declaratives test subject-verb agreement, i.e. morphology. Each type of sentences included six test items making a total of 36 test items. In addition, the test items included the grammatical and ungrammatical version of each sentences; which makes a total of 72 test items in total which are exemplified in the following:

Non-subject-initial declarative main clause:

(39) *Lexical verbs*

- a. *Yesterday went the teacher to the shop.
- b. Yesterday the teacher went to the shop.

(40) *Auxiliary verbs*

- a. *Every day should the students bring their books to school.
- b. Every day the students should bring their books to school.

Subject-initial declarative main clause:

(41) *Singular subjects and local distance agreement*

- a. *The boys in the black car looks very scary.
- b. The boys in the black car look very scary.

(42) *Plural subjects and local distance agreement*

- a. *The teachers gives their students a lot homework.
- b. The teachers give their students a lot of homework.

(43) *Singular subjects and long distance agreement*

- a. *The teacher with black shoes walk to work every day.
- b. The teacher with black shoes walks to work every day.

(44) *Plural subjects and long distance agreement*

- a. *The brown dog play with the yellow football.
- b. The brown dog plays with the yellow football.

[Jensen, 2016: 57]

A total of 60 Norwegian participants between the age of 11 and 18 were included ranging from 7th graders to upper secondary school attending second year of study in order to maintain varied proficiency groups. The total number of participants was split up into four proficiency groups: low intermediate, intermediate, high intermediate and advanced speakers. The main experiment was based on an untimed and web-based method which included an acceptability judgement test, a proficiency test and a background questionnaire. In the first part of the survey, the participants were asked to perform acceptability judgement test based on their target language knowledge. The acceptability judgement test included a total of 85 test items in which 13 were fillers. Furthermore, the test was pseudo-randomized to prevent the participants forming a consistent response. The participants' task was to rank each test items in a Likert scale from a number of 1-4 where 1 and 2 indicates unacceptable and 3 and 4 indicates acceptable. Furthermore, the experiment included a subset of a Standardized Oxford Proficiency test which contained 40 multiple-choice tasks and the final part included a set of background questionnaires.

The main findings reported in her study show that subject-verb agreement is significantly more difficult than verb movement in acquisition of English L2 by Norwegian speakers. Furthermore, the results also show that subject-verb agreement is persistently difficult not only for the speakers at the lower proficiency levels but also for the speakers at the higher proficiency levels. The result also shows that non-subject initial declarative clauses with auxiliary verb were the most difficult syntactic condition in verb movement. Similarly, long-distance agreement was reported more difficult than local agreement in morphology. In addition, the result also shows that participants had more problems in agreement with plural subjects than singular subjects. Regarding verb movement, a developmental jump in the performance of the participants from the intermediate stage to the high intermediate stage has been reported while acquisition of subject-verb agreement is developed slowly.

A number of studies have been carried out in L2 acquisition focusing on subject-verb agreement and word order in different languages. Further, in some studies (see, Slabakova, 2006; Jensen, 2016), acquisition of agreement and word order is compared in order to investigate the more difficult grammatical phenomena to acquire in L2 acquisition. In this regard, the present study is also focuses on acquisition of agreement and word order. The study is developed based on the experiment of Jensen (2016) and it aims to further test Bottleneck Hypothesis using Nepali L1 speakers. There are no other studies carried out earlier

using Nepali L1 speakers that compared the acquisition of agreement and word order in L2 acquisition of English. The distinct use of agreement and word order in Nepali makes the present study different from the other studies, carried out in the past.

5. Research Questions

The chapter presents the research questions that are posed in the present thesis. The thesis mainly aims to test the bottleneck hypothesis to find out whether functional morphology is harder than syntax for a second language learner. Beside this, the work focuses on the following research questions:

1. Do Nepali learners of English have problems with subject-verb agreement?
2. Does word order difference between two languages cause any difficulties in the acquisition of English word order by Nepali learners?
3. Is subject-verb agreement (functional morphology) more difficult than word order (syntax) in L2 acquisition?

5.1. Predictions

1. Nepali learners of English exhibit difficulties in subject verb agreement.
2. The word order differences between two languages (i.e. English and Nepali) contribute to difficulties in second language acquisition in relation to the acquisition of word order.
3. subject-verb agreement (functional morphology) is more difficult than word order (syntax).

Prediction 1 is based on the morphological conditions in relation to the subject-verb agreement. The morphological condition containing 3rd person singular subject in present tense has been suggested as a problematic situation in L2 acquisition of English subject-verb agreement. The rules related to the 3rd person singular –s morpheme in English is considered to be easy to learn, but as opposed, one of the most difficult to apply by L2 learners of English (Krashen, 1982). The prediction is based on the findings of several studies that have been reported in SLA. The studies revealed that both types of errors (i.e. omission and insertion of 3rd person singular marker –‘s’) are prevalent in subject-verb agreement (see e.g. Jensen, 2016; Sridhar, 1996; Sand, 1999a; Breiteneder, 2005). Further, in comparison to insertion of 3rd person singular –s, omission of –s has been a more consistent problem when the subject is 3rd person singular subject in present tense. In their study, Wee et. al (2010) argue that subject-verb agreement in relation to the 3rd person singular subject is the most

difficult part for Malaysian learners of English as they make numerous errors including both omission and insertion of 3rd person singular –‘s’.

Prediction 2 builds upon the argument that the L2 acquisition task becomes difficult when L2 is typologically different from the learners' first language (L1). Based on this view, Gass and Selinker (2001) argue that in the process of L2 acquisition, L1 affects L2 and it becomes the source of error in production and reception (Gass and Selinker, 2001: 67). Based on findings of several studies, it is evident that cross-linguistic influence shows some traces of negative transfer with respect to word order (verb placement). Following this view, Nepali and English are typologically different to each other since they have different word order. Therefore, it is predicted that Nepali learners of English might have some difficulties in L2 acquisition of verb placement (word order) verb placement parametric variation.

Prediction 3 builds upon the bottleneck hypothesis. The Bottleneck hypothesis predicts that functional morphology is the bottleneck of L2 acquisition, and therefore one of the most difficult phenomena for second language learners (Slabakova, 2013). Based on this hypothesis Slobakova (2013) argues that functional morphology is harder than syntax in second language acquisition.

6. Methodology

This chapter focuses on the research methodology and methods that were employed to conduct this research following the procedures of data collection.

An acceptability judgement test was deployed in order to elicit the data for the study. The acceptability judgement test is the most widely used quantitative method in syntactic research which is based on speakers' intuitions about the well-formedness of sentences (Dąbrowska, 2010). The acceptability judgement test is one of the several types of tests that require the participants to judge whether particular sentences are possible or not in either their native language or a language being learnt. Further, one of the purposes of using acceptability judgement test is to examine how closely L2 learner's knowledge of L2 is similar to that of L1 speakers. Richards and Schmidt (2013) defines that if the test instructions specify that the participants are to judge whether or not a sentence is acceptable, the test is called an acceptability judgement test. Acceptability deals with the L1 or L2 speaker's perception of the sentence (Loewen & Reinders, 2011).

An acceptability judgement test can be designed in a several ways. One of them involves participants to make their judgement whether the given sentences are either acceptable or unacceptable. Alternatively, participants can be asked to rank several sentences in the order of their acceptability. Finally, participants can be asked to rate each sentences on a continuum from more acceptable to less acceptable.

Acceptability judgement tests are based on the participants' perception on a given sentence whether they think it is acceptable or unacceptable in target language. However, as Schutze and Sprouse (2012) point out it is very difficult and sometimes impossible to measure the perceptions directly which are in the minds of the participants. Thus, Schutze and Sprouse (2012: 3) further suggest that such perception and judgement can be made possible to indirectly measure through using some rating scale. For example, various scales (i.e. Likert scale task, magnitude estimation task, the thermometer task) have been used in the quantitative studies to examine the participants' perception. Keeping this information in mind, I have used the Likert scale task in order to examine the participants' perception based on their judgements.

Likert scale uses a numerical scale that usually consists of an odd number of rating points such as 1–5 or 1–7 or in some cases 1–9 can also be found depending upon the test items to be judged. The endpoints in the scale are defined as acceptable or unacceptable, and the job of the participants is to rate each test items within the given rating scale. The Likert scale has been used extensively in various quantitative studies within the field of language and linguistics. One of the key benefits of using Likert scale is attributed to its features that are numerical and intuitive. Since the Likert scale is both numerical and intuitive, it can be used to find out the size of a difference between conditions by applying some statistical tests such as ANOVA and linear mixed-effects modeling (Schutze and Sprouse, 2012: 7). Furthermore, Dabrowska (2010) points that Likert scale is more natural than other types of measure scales. She further argues that participants are to only decide whether the given sentence is either ‘good’ or ‘bad’. Since the rating scale does not include other degrees of comparison as ‘better’ or ‘worse’, it makes the participants’ job in making their judgement simple and easy.

In spite of its simplicity and naturalness, the Likert scale task has some limitations as well. The main limitation of Likert scale task is primarily attributed to the use of numerical values it assigns to each test items. For instance, the scale suggests that the interval between the assigned numerical values is uniform (i.e. the interval between 1 and 2 is one unit and the interval between 2 and 3 is one unit). However, it is almost impossible to ensure the intervals between the numerical values are uniform since the participants can only choose the limited number of response points (i.e. the rating scale does not include 3.5 points). As a result, the participants realize the difference between 1 and 2 is same as the difference between 4 and 5. Therefore, it can be very difficult to judge the correct value of the scale and the distance between the assigned numerical values (Dabrowska, 2010, Schutze and Sprouse, 2012).

The acceptability judgement task has also been criticized for being unreliable since it produces results which show the tendency of false positives and false negatives also known as type 1 and type 2 errors respectively (Sprouse and Almeida, 2012). Here, the term false positives report a difference between two (or more) tested conditions though there is no significant difference between them exists. Similarly, false negatives report that there is no difference between the tested conditions although a difference between them actually exists. Similarly, Further, Sprouse and Almeida, (2012: 611) argue that type 1 errors (i.e. false positives) are considered to be more harmful in the development of scientific theories because of misleading results. Scientific theories are based on the differences between conditions (i.e.,

positive results), but not the invariance between conditions (i.e., negative results) (Sprouse and Almeida, 2012: 611).

Despite its criticisms, however, Sprouse & Almeida (2011) suggested that acceptability judgement experiment is in fact, considered to be more powerful and reliable method at detecting differences between the sentence types than other formal experiments. The evidences have been drawn by comparing the false negatives/statistical power of two types of acceptability judgement experiments: magnitude estimation and force choice for all 469 data points from a popular syntax textbook (Adger, 2003) using 440 native participants. The results suggest that the maximum discrepancy between traditional methods and formal experimental methods is 2% and the minimum replication rate of these 469 data points is 98%.

6.1. Experiment Design

The experiment has been designed on the basis of online survey method. The online survey included three different sets of questionnaires (i.e. an acceptability judgement task, a proficiency test and a set of questionnaire related to background information of the participants) which are discussed in section 6.1.1. In addition, types of test items and participants included in the experiment are discussed in sections 6.1.2 and 6.1.3 respectively.

6.1.1. The procedure

The software Survey Gizmo was used to perform the data collection procedure. Survey Gizmo is an online based software platform which is useful to construct online surveys, questionnaires and research forms. The experiment was conducted based on an online survey method which included an acceptability judgement test, a proficiency test and a background questionnaire. The entire survey can be found in the appendix.

In the first part of the survey, the participants were asked to perform acceptability judgement test based on their target language knowledge. The acceptability judgement test included a total of 46 test items in which 10 were fillers. The fillers were added to the questionnaire as distracters to prevent the participants forming a consistent response pattern protecting objectivity and credibility of the test. In doing so, the survey included 5 test items in each

page and the participants' task was to rank them in a Likert scale from a number of 1-4. The ranking numbers 1 and 2 indicates unacceptable and 3 and 4 indicates acceptable. Therefore, the task was to make a judgement whether the given test items were 'good' or 'bad' in target language.

(45)

6. The poet a poem wrote last year.	1 	2 	3 	4 
7. The brown dog play with the yellow football.	1 	2 	3 	4 
8. The sisters walks in the forest.	1 	2 	3 	4 
9. Car the an old man hit.	1 	2 	3 	4 
10. The little girl cooked her food carefully.	1 	2 	3 	4 

The proficiency test was included in the second part of the survey consisting of 40 multiple choice test items altogether. The proficiency test was based on a subset of Standardized Oxford Proficiency Test which has been used in several studies in the field of language acquisition. The participants' task in this test was to complete the whole test by choosing a correct option among the three. The entire proficiency test was divided into two parts: the first part includes general questions whereas the later part is based on a continuous story. An example of the proficiency test items are presented in (46-50).

- (46) In England _____ time of year is usually from December to February.
- coldest
 - the coldest
 - colder
- (47) _____ people don't know what it's like in other countries.
- The most
 - Most of
 - Most
- (48) Very _____ people can travel abroad.
- less
 - little
 - few
- (49) Mohammed Ali _____ his first world title fight in 1960.
- has won
 - won
 - is winning
- (50) After he _____ an Olympic gold medal, he became a professional boxer.
- had won
 - have won
 - was winning

In addition, a set of background questionnaire is included at the last part of the survey. The questionnaires are created to collect the information regarding language background (i.e. the language spoken at home, school and with friends), age and grade of the participants.

Before the actual test begins, the participants were given detail information about the project. The participants were informed the purpose of the study and how the test would be used in the experiment as well. Two sample examples are given to help the participants to understand the rules and way of performing the test. The participants were asked to read the instructions and the sample answers provided at the introduction page thoroughly. Further, the participants were given 5 minutes to ask questions if they still have some doubts. All the test items in each page were given in random order to avoid copying others which also focuses on validity and reliability of the test. It was done in a classroom to make sure the participants answer the questionnaires without any help or interruption. In addition, the procedure ruled out any

possible environmental factor in order to maintain the results free from unnecessary influence. Most of the participants completed the test in about 20 to 25 minutes.

6.1.2. Test sentences

As I mentioned in the earlier section, the main test includes 46 test items in total, out of which 10 are fillers. The test includes simple declarative main clauses with lexical verbs and all of them begin with DP subjects. However, three types of sentences are distinguished in relation to tense and number: subject-initial declarative sentence in simple past tense form, subject initial declarative with 3rd person singular subject and 3rd person plural subject. Each type of sentences contains six test items making of 18 test items. In addition, the test items include the grammatical and ungrammatical version of each sentences; which makes a total of 36 test items in total. Fillers are the sentences which are neither grammatical in English nor in Nepali. All the fillers are formed by scrambling the pattern of actual word order.

Sentence type 1: Subject-initial declarative sentence in simple past tense form

Sentence type 2: Subject-initial declarative sentence with 3rd person singular subject

Sentence type 3: Subject-initial declarative sentence with 3rd person plural subject

Here, the type 1 sentence is designed to test word order (i.e. syntax) while the last two (i.e. Type 2 and Type 3) sentences are created to test subject-verb agreement (i.e. morphology). Type 1 sentence is different from rest of the two types of sentences in relation to tense. To elaborate, type 1 sentence is designed in past tense form while others two (i.e. type 2 and type 3) are in present tense form. Such distinction is made in order to prevent the overlapping judgement from subject-verb agreement. Therefore, the type 1 sentence tests only the VO vs OV phenomena in relation to word order which are exemplified in (51).

(51) *The boy a letter wrote last week.

The boy wrote a letter last week.

Regarding subject-verb agreement, two different sentence structures are constructed in relation to number associated to the subject: sentence with 3rd person singular subject (type 2) and sentence with 3rd person plural subject (type 3). These are exemplified in (52) and (53) respectively.

(52) *Sentence with 3rd person singular subject*

*The teacher eat fish for dinner every day.

The teacher eats fish for dinner every day.

(53) *Sentence with 3rd person plural subject*

*The teachers gives their students a lot of home works.

The teachers give their students a lot of home works.

The sentences contain lexical verbs only. Furthermore, all the subjects are regular nouns which receive the regular plural suffix –s to make it plural form of the subject.

At last, the test includes 10 fillers which are ungrammatical both in English and Nepali. Therefore, the fillers do not have their counterparts as grammatical and ungrammatical. The fillers are mainly related to word order and are deviated from their respective order. In doing so, the combination of the words is scrambled to make sure that they sound non-target sentences in both English and Nepali. For example, an English sentence never begins with singular verbs like ‘*sits, eats, drinks*’ etc. and never ends with determiner ‘*the*’ verb and so Nepali does too. These are exemplified in (54).

(54)

(a) *Writes sister a letter the.

(b) *Car the an old man hit.

6.1.3. Participants

A total of 48 participants between the age of 15 and 18 were included in the experiment. Accordingly, 30 participants were taken from higher secondary level in which 15 participants from each 11th and 12th graders and 18 were from secondary level 10th graders. The participants were chosen from different grade levels in order to maintain varied proficiency groups. The experiment was conducted at a private boarding school in Kathmandu valley, Nepal. The school was identified with the help of one of my friends who has been involved in teaching and research work in the department of English Language Teaching at Tribhuvan

University. The school was contacted through personal visit. The school authority was provided an information letter about the project in order to get permission to employ the participants. Further, the participants were chosen by the school and the test was carried out during school hours.

7. Results

The chapter focuses on the statistical analysis of the participants' judgement of two different grammatical phenomena, agreement and word order respectively. For this, the analysis aims to look at if there are any statistically significant differences between the judgement of agreement and word order. This provides information about the difficulty of agreement and word order. The p-value is set to 0.05, which means that any value smaller than this number is statistically significant. Furthermore, the dependent variable is the mean scores of the judgements in the acceptability judgement test, and the independent variables are the constructions and the proficiency scores.

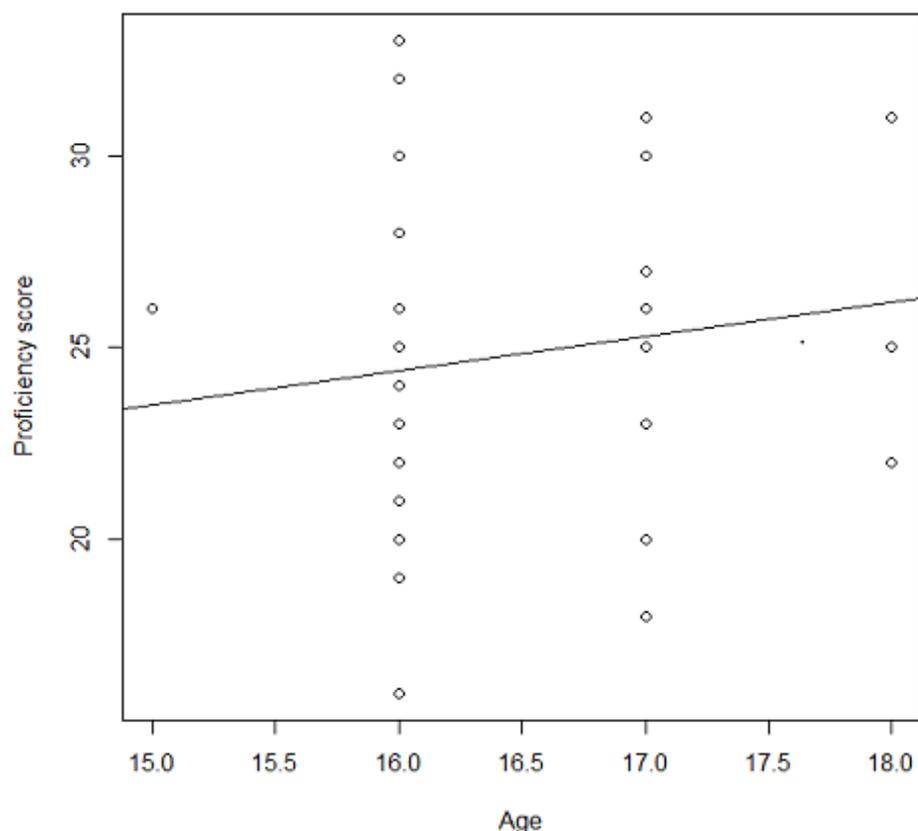
7.1. The proficiency test

In order to test the proficiency level of the participants, a subset of the Standardized Oxford Proficiency test was adopted. This consists of 40 multiple choice items containing three alternative answers for each question. Participants were assigned 1 score for each correct answer. Accordingly, a maximum score of 40 could be assigned to the participants based on their correct answers.

In the experiment, the assigned proficiency score for all the participants ranges between 16 to 33 points and the age of the participants ranges between 15 to 18 years. Based on this data, figure 2 shows the correlation between the participants' age and their proficiency scores.

The adjusted r^2 -value for the correlation between age and proficiency scores is 0.004486. The adjusted r^2 -value indicates that only 0.4 % of the proficiency score can be explained by the participants' age. Further, since the p-value is 0.2767, the correlation between age and proficiency score is statistically insignificant. Accordingly, the data show no correlation between participants' age and their proficiency score. It implies that age does not define the proficiency score.

Figure 1: Correlation between age and proficiency scores.



7.2. The acceptability judgement test

As discussed in the earlier chapters, the acceptability judgement test consists of 18 pairs of test items. Each pair includes their grammatical and ungrammatical versions and therefore, the acceptability judgement test contains a total of 36 test items. The acceptability test included fillers too, but it is not included in the results. The test items were judged on a Likert scale. The Likert scale consists of four rating numbers from 1 to 4, where 1 means completely unacceptable and 4 means completely acceptable. The numbers on the Likert scale are treated as binary variables with the categories *unacceptable* and *acceptable*, where 1 and 2 indicate unacceptable and 3 and 4 indicate acceptable. Accordingly, if the mean score is ranked high, it suggests that most participants have judged the sentences as acceptable. In contrast, if the mean score is ranked low, it suggests that most participants have judged sentences as unacceptable. Following this, the participants are considered to have correct judgements when the mean score of the judgement for ungrammatical sentences is ranked low and grammatical sentences is ranked high.

7.2.1 Agreement

In the following sections, agreement with singular and plural subjects along with their grammatical and ungrammatical versions are analysed to test whether there is any statistical difference. For this, I first look at the mean score for the judgement of grammatical and ungrammatical singular agreement. Similarly, mean score for the judgement of grammatical and ungrammatical plural agreement will also be analysed. Further, the mean score for the judgement of singular and plural agreement will be compared. Lastly, the mean score for the judgement of grammatical and ungrammatical agreement as a whole will be analysed.

Table 4 shows the mean score for the judgement of grammatical and ungrammatical singular agreement including all 48 participants. The mean score in the table shows that ungrammatical singular agreement is significantly lower than grammatical singular agreement. The mean score also indicates that the ungrammatical sentences were frequently accepted.

Table 4: Mean score for the judgements of grammatical and ungrammatical singular agreement, all participants

	All Participants
Grammatical	3.369444
Ungrammatical	2.458333
P- value	3.705e-12

Similarly, based on the data in table 5, it can be explained that ungrammatical plural agreement is significantly lower than grammatical agreement. It means that ungrammatical sentences were frequently accepted.

Table 5: Mean score for the judgements of grammatical and ungrammatical plural agreement, all Participants

	All Participants
Grammatical	3.056250
Ungrammatical	2.506944
P- value	0.0002225

Table 6 shows comparison of the mean score for the judgement of singular and plural agreement when all 48 participants are included. The data shows that the mean score for grammatical singular agreement is significantly higher than grammatical plural agreement. It indicates that the participants accepted more acceptable sentences in grammatical singular agreement than grammatical plural agreement. On the other hand, comparing ungrammatical singular and ungrammatical plural agreement, the data shows that there is no statistically significant differences between the mean score of these two conditions since the p-value is greater than 0.05. The participants frequently accepted the incorrect judgement of both ungrammatical singular and ungrammatical plural sentences.

Figure 2: Mean score for the judgements of singular and plural agreement, all Participants

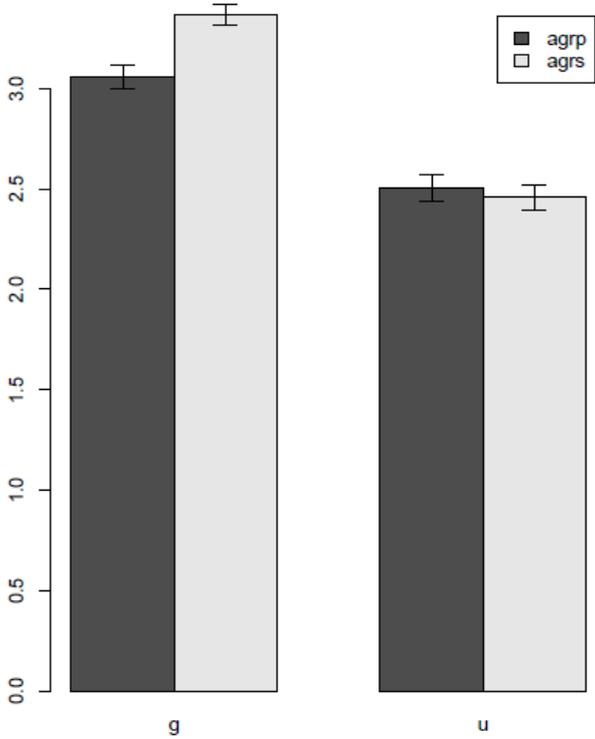


Table 6: Mean score for the judgements of singular and plural agreement, all Participants

	Grammatical	Ungrammatical
Agreement Singular	3.369444	2.458333
Agreement Plural	3.056250	2.506944
P- value	0.0006685	0.5983

Table 7 shows the average mean score of grammatical and ungrammatical agreement including both singular and plural. The data shows that the mean score for ungrammatical agreement is significantly lower than grammatical agreement.

Table 7: Mean score for the judgement of grammatical and ungrammatical agreement, all participants

	All participants
Grammatical	3.212847
ungrammatical	2.482639
P-value	5.352e-09

7.2.2 Word order

With reference to word order, the mean score for the judgement of grammatical and ungrammatical word order shows that ungrammatical word order is significantly lower than grammatical word order, illustrated in table 8. It signifies that the participants have accepted significantly less ungrammatical sentences.

Table 8: Mean score for the judgements of grammatical and ungrammatical word order, all participants

	All Participants
Grammatical	3.521528
Ungrammatical	1.177083
P- value	2.2e-16

7.2.3. Comparison between agreement and word order

Table 9 shows comparison of the mean score for the judgement of agreement and word order when all 48 participants are included. The data shows that the mean score of the judgement for both grammatical agreement and grammatical word order is high. Further, since the p-value is smaller than 0.05 (i.e. 0.0001142), it signifies that grammatical word order is significantly higher than grammatical agreement. It also indicates that the participants accepted fewer unacceptable sentences in grammatical agreement than grammatical word

order. Furthermore, comparing ungrammatical agreement and ungrammatical word order, the data shows that ungrammatical word order is significantly lower than ungrammatical agreement. It implies that the participants accepted significantly less incorrect sentences in ungrammatical word order than in ungrammatical agreement.

Figure 3: Mean scores for judgements of agreement and word order, all participants

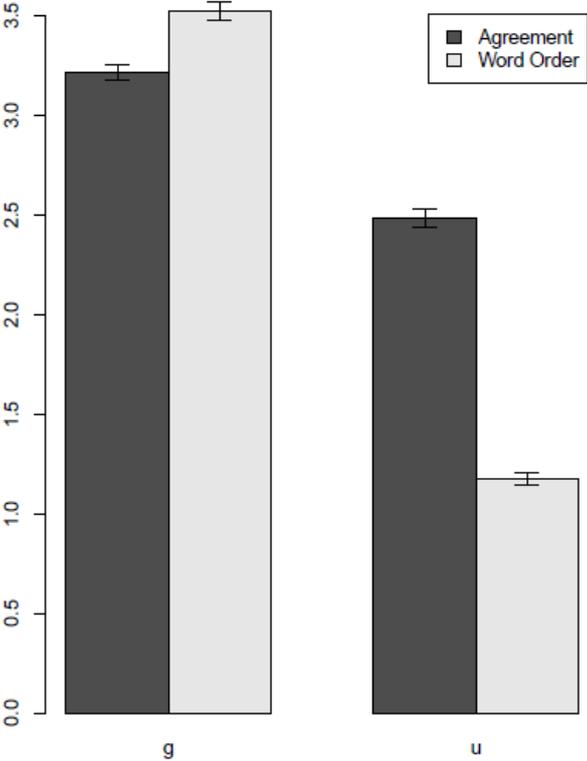
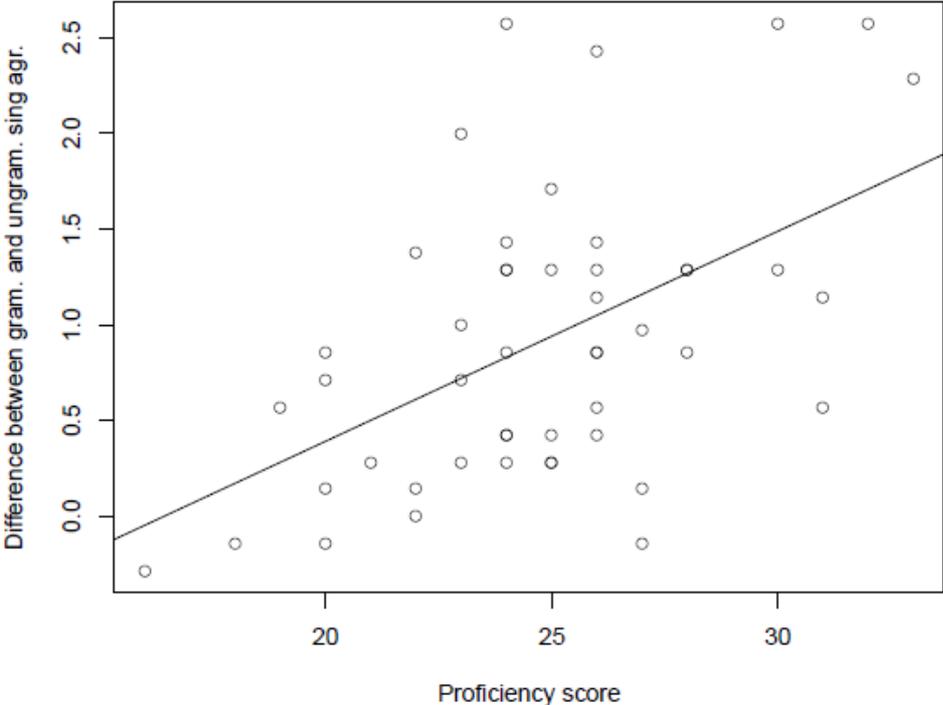


Table 9: Mean scores for judgements of agreement and word order, all participants

	Grammatical	Ungrammatical
Agreement	3.212847	2.482639
Word order	3.521528	1.177083
P-value	0.0001142	2.2e-16

Figure 4: Mean scores of judgement and proficiency score, singular agreement



The adjusted r^2 -value in figure 4 for the correlation between singular agreement and proficiency scores is 0.2209. In this sense, the adjusted r^2 -value indicates that 22 % of the grammatical singular agreement can be explained by participants' proficiency score. Further, since the p-value is smaller than 0.05 (i.e. 0.0004439), the co-relation between singular agreement and proficiency score is statistically significant. Accordingly, the data show weak correlation between singular agreement and proficiency score.

Figure 5: Mean scores of judgement and proficiency score, plural agreement

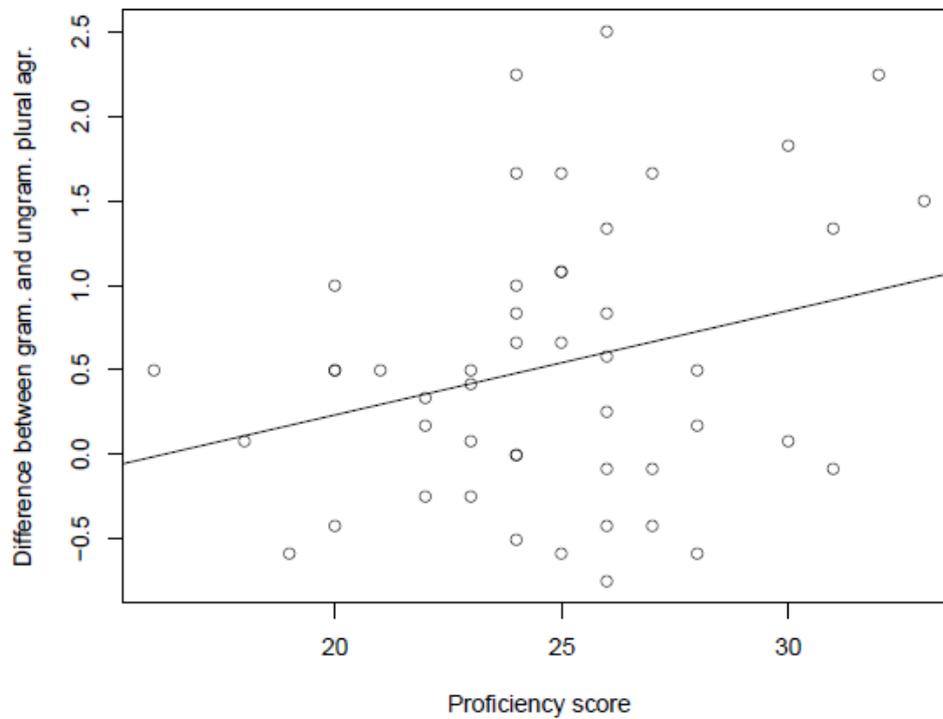


Figure 5 shows that there is a statistically significant correlation between plural agreement and proficiency score since the p-value is smaller than 0.05 (i.e. 0.009429). The adjusted r^2 -value for the correlation between plural agreement and proficiency scores is 0.1189. It indicates that only 11 % of the grammatical plural agreement can be explained by participants' proficiency score. Accordingly, the data show a weak correlation between plural agreement and the proficiency score.

Comparing singular and plural agreement as in figure 4 and 5, the adjusted r^2 -value as 0.2209 and 0.1189 for singular and plural agreement respectively illustrate that there is a stronger relationship between singular agreement and proficiency score than plural agreement and proficiency score.

Figure 6: Mean scores of judgement and proficiency score, word order

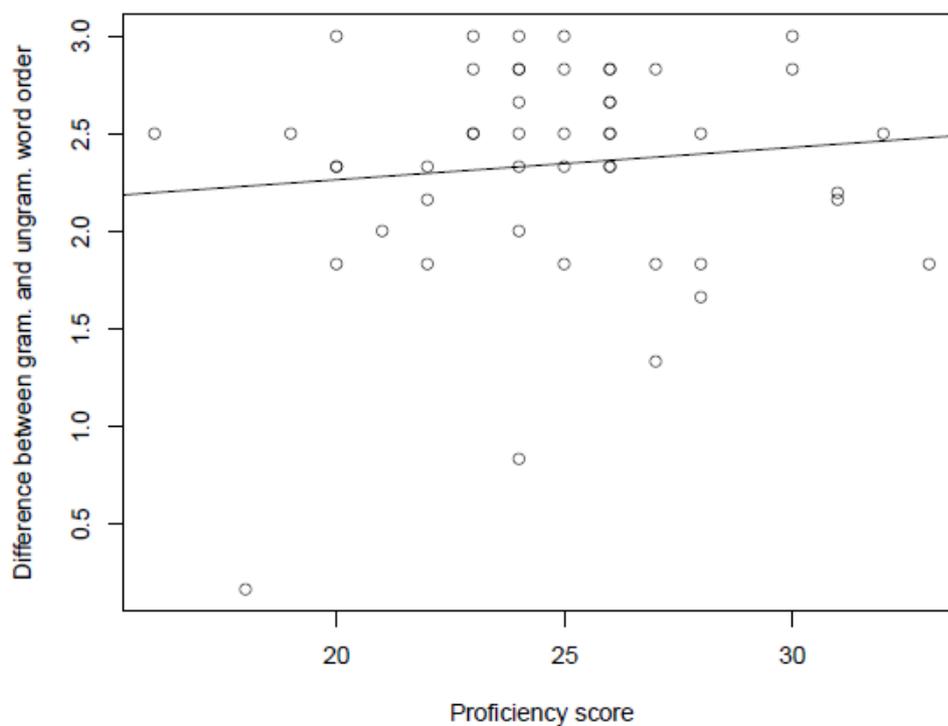


Figure 6 shows that the adjusted r^2 -value for the correlation between word order and proficiency scores is -0.01028. It indicates that around 1 % of the grammatical word order can be explained by participants' proficiency score. Further, since the p-value is greater than 0.05 (i.e. 0.4737), the co-relation between word order and proficiency score is not statistically significant. Accordingly, the data show no statistically significant correlation between word order and their proficiency score.

8. Discussion

The chapter focuses on the discussion of the results in chapter 7. The findings are discussed one after another according to the research questions posed in this thesis. The research questions presented in section 5 are repeated for the convenience in the following.

Research Questions

The thesis mainly aims to test the bottleneck hypothesis to find out whether functional morphology is harder than syntax for a second language learner. Beside this, the work focuses on the following research questions:

1. Do Nepali learners of English have problems with subject-verb agreement?
2. Does word order difference between two languages cause any difficulties in the acquisition of English word order by Nepali learners?
3. Is subject-verb agreement (functional morphology) more difficult than word order (syntax) in L2 acquisition?

Predictions

1. Nepali learners of English exhibit difficulties in subject verb agreement.
2. The word order differences between two languages (i.e. English and Nepali) contribute to difficulties in second language acquisition in relation to the acquisition of word order.
3. subject-verb agreement (functional morphology) is more difficult than word order (syntax).

8.1. Do Nepali learners of English have problems with subject-verb agreement?

In relation to the research question 1, it is predicted that Nepali learners of English exhibit difficulties in subject verb agreement. The prediction has been supported by the result in section 7.2.1. The result shows that the mean score of the judgement for ungrammatical agreement is significantly lower than grammatical agreement. It also shows that the mean

score of the judgement for both grammatical and ungrammatical agreement are ranked high, signifies that the participants have accepted several incorrect sentences.

Furthermore, the problems with subject-verb agreement are analysed dividing into two conditions as agreement with singular and plural subject. In addition, the more difficult conditions between singular and plural agreement will be discussed.

The result in section 7.2.1. shows that the mean score of the judgement for agreement including both singular and plural subjects is ranked high when the sentences are ungrammatical. The high mean score of the judgement for ungrammatical sentences indicates that the participants accepted more incorrect sentences which suggest that participants' display weak performance in the acquisition of agreement using both singular and plural subjects. However, the agreement with plural subjects seems to be slightly more problematic condition, as it is ranked significantly lower than the singular agreement when the sentences are grammatical and slightly higher when the sentences are ungrammatical.

Comparing singular and plural agreement, as illustrated in section 7.2.1.1, the results also show that the mean score of the judgement of both singular and plural ungrammatical agreement are ranked high. It means the participants make more errors when the sentences are ungrammatical. This supports the findings of Jensen (2016) in which she reports that there are significantly more incorrect judgements with agreement when the sentences are ungrammatical.

The first research question posed for the experiments was whether L2 learners of English have problems in acquiring subject-verb agreement including the verbal inflection for 3rd person singular –s. Compared to Nepali, because English has a poorly inflected verbal system, it was expected that Nepali L2 learners of English show low rates of accuracy in producing the inflection for 3rd person singular -s. This prediction was supported by the data. In the acceptability judgement task, participants performed poorly, displaying frequent errors for both grammatical and ungrammatical sentences. They frequently omitted the verb inflection and failed to produce the inflection where it is applicable. Similarly, regarding grammatical sentences, the mean score of the judgement show that the agreement when the subject is in plural form seems to be slightly more problematic than the subject with singular subjects. This supports the findings of Jensen (2016). In her findings Jensen (2016) also

claims that the agreement is more problematic when the subject is plural than singular. The problematic situation can be attributed to the problems related to the plural subject. The participants tend to prefer the occurrence of the suffix *-s* on the verb as in (56), which causes more errors with plural subjects. This can be illustrated in the following judgements.

(55) *The brown dog play with the yellow football.

(56) *The sisters walks in the forest.

The finding is further supported by Urano (2008) in section 4. Based on findings, he argued that not only the 3rd person singular but 3rd person plural subjects are also the difficult part in subject-verb agreement in second language acquisition. In addition, White (2001) also reported similar result where 31 cases of over-suppliance errors were reported involving 3rd person plural subjects out of 32.

The subject of the sentence determines the agreement, and hence, the verb-forms are dependent on whether the subject is singular or plural. As a general rule in agreement, singular subject takes singular verb and plural subject takes plural verb. However, the participants had difficulty to apply this general rule of agreement correctly; as a result they produce erroneous sentences as in (55) and (56). According to the data, the most error type occurred in the participants' judgement were omission and addition of the 3rd person singular suffix *-s* in agreement with both singular and plural subjects which gets support from the previous findings (see Jensen, 2016; Sridhar, 1996; Sand, 1999a Urano, 2008). Furthermore, the current finding also supports the findings of Wee et.al (2010). In their findings it was concluded that the participants find the difficulties in the acquisition of subject-verb agreement as they made several omission and addition errors.

A number of studies in the acquisition of 3rd person singular morpheme in L2 acquisition have focused on the typological proximity between the L1 and the language to be acquired (Blom, Paradis & Duncan, 2012). Several studies on morphology suggest that the acquisition of subject-verb agreement of L2 English is equally difficult whether the learners' language show any agreement system or not. To elaborate, Jensen (2016) concluded that the L2 acquisition of subject-verb agreement is difficult for Norwegian learners since there is a mismatch in agreement system between English and Norwegian. Norwegian does not show overt subject-verb agreement but English does. Accordingly, her result suggests that subject-verb

agreement is difficult for those L2 learners who do not have this system in their language. In this regard, Eubank (1994) argues that the absence of verbal inflection system in L2 learner's speech suggests that there can be some type of deficit in the learner's L2 competence. In addition, it has also been considered that the L2 learners with a rich verbal inflection system seem to be more successful than those L2 learners with no or poor verbal inflectional system in L1 (Picón Jara & Capdevila, 2015). Based on the study of Stauble (1984), Hawkins (2003:58) points out that Spanish-speaking learner performed far better on English verbal agreement than their Japanese-speaking counterparts. It is noted that Spanish, but not Japanese, has a rich system of subject-verb agreement. On the other hand, however, the finding of the current study contrasts with this statement. The findings of the current study show that acquisition of subject-verb agreement of L2 English is difficult for Nepali L2 learners although Nepali shows a richly inflected verbal system. Further, it supports the findings of Morales (2014) who reports that child L2 learners of English show low rates of accuracy in producing the inflection for 3rd person singular –s despite the fact that Spanish has a richly inflected verbal system.

Based on the findings discussed above (e.g. Jensen, 2016; Morales, 2014), it can be argued that acquisition of subject-verb agreement is equally problematic for all the L2 learners, regardless the knowledge of previously acquired languages. To be specific, Norwegian learners of L2 English display difficulty in acquisition of subject-verb agreement since they do not have overt agreement system (Jensen, 2016). However, on the other hand, Morales (2014) also reports that Spanish learners of L2 English have several problems in acquisition of 3rd person singular –s producing low rates of accuracy. It is notable that Norwegian does not show any overt agreement system, while Spanish displays a rich agreement system and so does Nepali too. In this regard, the difficulty level of functional morphology is associated with the formal features carried to account for the syntactic and semantic cross-linguistic differences. Such formal features cannot be transferred from the previously acquired languages, but should be lexically learned (Slabakova, 2013: 14). With reference to this, the acquisition of 3rd person singular-s can also be analyzed from a perspective of processing framework, which claims that input plays an important role in the development of 3rd person singular morpheme –s for L2 learners of English. In line with this, Blom, Paradis & Duncan (2012) argued that the acquisition of verbal inflection depends on what is called “lexicon strength”. They further proposed that if the lexicon strength increases, it can help the learners to more accurate when using verbal inflections. Consequently, the verbs that tend to occur

frequently in the input can be an advantage for L2 learners in acquisition of the 3rd singular morpheme -s.

The supporters of the *Missing Surface Inflection Hypothesis* (MSIH) claim that learners have access to L2 functional features such as T and Agr, however, the variability in the use of inflectional morphology results from processing problems (Haznedar & Schwartz, 1997; Haznedar, 2001; Ionin & Wexler, 2002; Lardiere, 1998; Prévost & White, 2000). The *Missing Surface Inflection Hypothesis* (MSIH) posits that functional categories are available in the L2 learners' grammar; however, learners show difficulties in mapping between tense features and the appropriate surface forms in L2 acquisition which restricts them from producing the target-like inflectional morpheme.

To sum up, it can be concluded that most L2 learners of English show difficulties producing the inflection for 3rd person singular. Following this, agreement with both singular and plural subject is considered to be problematic in L2 English. Therefore, the findings support the prediction 1. However, based on the result, it is suggested that agreement with plural subject seems to be slightly more problematic in L2 acquisition of English. Thus, based on the findings of the current study, it is concluded that Nepali learners of English face great difficulties in acquisition of subject-verb agreement due to the formal features carried by functional morphology of L2 English that cannot be transferred from L1 Nepali but should be learnt. Furthermore, in the acquisition of subject-verb agreement, no role seems to be played by L1 Nepali though it shows rich verbal inflections.

8.2. Does word order variation exhibit any difficulties in the acquisition of English word order by Nepali learners?

Regarding the research question 2, it is predicted that the word order variation between two languages (i.e. English and Nepali) contributes to difficulties in L2 acquisition of English word order. As illustrated in section 7.2.2, the mean score of grammatical word order is significantly ranked high, while ungrammatical word order is ranked low. It indicates that most of the participants have good performance in word order. The second research question posed for the experiments was whether structural differences in word order exhibits any difficulties in acquisition of English word order by Nepali learners. Because of the structural differences in word order between English and Nepali, it was expected that participants might

display some errors which results into difficulty in word order acquisition. However, the prediction was not supported by the result as participants displayed good performance although English and Nepali are structurally different languages. A similar finding was concluded in Jensen (2016) where she also reported that the participants' performance in verb movement was good. The results in present study show that participants displayed better performance in word order compared to the findings of Jensen (2016). The differences in result can be interpreted in two ways: (a) the pattern of word order itself and (b) participants involved.

Structurally, Norwegian is a V2 (verb second) language, which means that the verb always occurs in the second position of a declarative main clause. The V2 phenomenon in Norwegian is derived by the verb movement. The V2 word order is caused by V-to-C (or V-to-I-to-C) movement. Norwegian learners are required to 'unlearn' the V2 rule while learning English word order that they acquired during their first language acquisition (Westergaard 2003: 86). In contrast, Nepali does not allow verb movement as it always occurs in final position.

The present study included participants from secondary and higher secondary levels only (10th, 11th and 12th graders) ranging between the ages of 15 to 18. All the participants included in the experiment had more than eight years of exposure in English. Thus, all the participants including those who had low proficiency score performed well in L2 English word order. Based on this, it can be argued that the acquisition of English word order might be difficult for the beginners who are not exposed with sufficient language input. In contrast, in Jensen's study (2016), it is reported that the participants' performance in verb movement is weak at the low intermediate and intermediate stages, and strong at the high intermediate and advanced stages. This is because her study included a varied age group learners ranging from 11 to 18 years (i.e. 7th graders to upper high school).

Furthermore, it was also noted that some the participants accepted few incorrect sentences in both grammatical and ungrammatical word order which seems to be some traces of language transfer from L1. However, since such errors did not seem to be persistent though very few participants only committed such errors. In line with this, I argue that such errors cannot be described as the traces of language transfer but some unconscious mistakes only and therefore, this should be further compared to native speakers of English in order to see if there

was any difference. Such unconscious errors with the judgements made by the participants are illustrated in (57) and (58).

(57) *Accepted as grammatical*

- (a) The poet a poem wrote last year.
- (b) The worker a house built in January.

(58) *Accepted as ungrammatical*

- (a) The dog chased a cat quickly.
- (b) The poet wrote a poem last year.

There are contrasting views as to whether an L1 basic word order can be transferred to L2 acquisition. In this regard, the findings of the current study report that there are no evidences of transfer of word order from Nepali to English. The findings are supported by McFadden (2005) in which he also found no evidence of such transfer in Japanese learners of English (i.e., Japanese uses SOV order, while English uses SVO).

Several studies in L2 acquisition are concerned to examine how word order in L2 might be influenced by the structural differences of the word order in L1. Moreover, the previous findings show conflicting evidence relating to the influence of L1 on the L2 word order in production. In line with this, some studies report that L2 acquisition of word order is affected the L1 structure. On the other hand, others suggest that the structural nature of L1 does not influence in the production of simple declarative sentences in English (Hengeveld, Rijkoff and Siewerska, 2004).

8.3. Is subject-verb agreement (functional morphology) more difficult than word order (syntax) in L2 acquisition?

The prediction in research question 3 is that subject-verb agreement is more difficult than word order. Regarding the prediction, the result in section 7.2.3 shows that the high mean score of judgements for agreement in both grammatical and ungrammatical sentences indicates that the participants accepted more incorrect sentences. The more incorrect

sentences for agreement in both grammatical and ungrammatical sentences suggest that the participants show weak performance in subject-verb agreement. In contrast, the mean score of judgements for word order is ranked very high which means that the participants accepted only very few incorrect sentences when the sentences are grammatical. Similarly, the mean score of judgements for word order is ranked very low which means that the participants usually rejected incorrect sentences. It suggests that the participants display good performance in word order.

These observations indicate that learning the rule of subject-verb agreement does not seem to be hard but using it in real life is difficult than learning the basic word order in L2 acquisition of English by Nepali learners. This findings support the prediction 3: subject-verb agreement is more difficult than word order.

The finding of the current study is further supported by the findings in previous studies, such as Haznedar (2001), Ionin and Wexler (2001) and Lardiere (1998a; b), who all found that the accuracy rate of syntactic phenomena is higher than the accuracy rate of verbal inflection. It means that L2 learners of English are more accurate with syntactic phenomena in obligatory contexts compared to morpho-syntactic phenomena related to the same functional category.

Slabakova (2013) argues that knowledge of narrow syntax comes before the accurate knowledge of functional morphology in production and comprehension of a second language. She further argues that the difficulty level of functional morphology is associated with the formal features carried to account for the syntactic and semantic cross-linguistic differences. Such formal features encoded in functional morphology cannot be transferred from the previously acquired languages and therefore, should be lexically learned (Slabakova, 2013). In contrast, the features associated with narrow syntax can be facilitated by the knowledge of previously acquired languages with positive transfer.

Based on the discussion above, the data show that acquisition of the syntactic features is easier than functional morphology related to it supporting the view of *syntax before morphology* which argues against *morphology before syntax* view. Accordingly, the *syntax-before-morphology* view argues that the learners can still be engaged in the syntactic tasks related to the inflectional morphology to which the L2 learners do not show accurate performance (White, 2003). The arguments are based mainly on the assumption that L2

learners acquire abstract syntactic structure earlier than the target-like inflectional morphology. The mapping problems between the tense features and surface structure in L2 attribute to difficulty in producing target-like inflection. Therefore, the L2 learners can perform accurately with complex syntactic structure despite the fact that they may show a low rate of tense and agreement inflection associated to such complex syntactic structure.

Bottleneck hypothesis primarily focuses on the difficulty level between morphology and syntax and predicts that morphology is more difficult than syntax in L2 acquisition. In addition, the hypothesis also contemplates on the way in which acquisition of functional morphology and syntax develop in L2 acquisition. In this regard, the main prediction of bottleneck hypothesis has already been supported by the results above (i.e. the acquisition of subject-verb agreement is more difficult than word order in L2 acquisition of English by Nepali learners). However, it is not sufficient to test the bottleneck hypothesis. Therefore, in the following section, I discuss the way how acquisition of subject-verb agreement and word order develops. For this, I discuss the co-relation between proficiency scores and the way in which subject-verb agreement and word order are judged in the result section.

As illustrated in section 7.2.3, there is statistically significant correlation between proficiency scores and agreement with singular and plural subjects and the correlation is weak. The results show that only 22% and 11% of the co-relation between proficiency score and agreement with singular and plural subjects can be explained respectively. To elaborate, the adjusted r^2 -value for the correlation between proficiency scores and agreement with singular subject is 0.2209 and agreement with plural subject is 0.1189. Accordingly, a weak correlation suggests that all participants judge the sentences similarly, regardless of their proficiency score. The correlation between proficiency scores and agreement with singular subject is stronger compared to agreement with plural subjects. Furthermore, the mean scores for agreement with both singular and plural subjects are ranked high in both grammatical and ungrammatical sentences (see section 7.2.1). It indicates that participants make few incorrect judgements in both grammatical and ungrammatical sentences regardless of their proficiency scores. It means as the weak correlation between proficiency scores and agreement suggests that the performance in agreement does not increase as the proficiency score increases.

In contrast, there is no statistically significant correlation between proficiency scores and word order. In addition, it does not show any correlation between proficiency scores and word

order since the adjusted r^2 -value is -0.01028. Furthermore, the mean scores for word order are ranked high when the sentences are grammatical while the mean scores for word order are ranked low when the sentences are ungrammatical. It indicates that participants usually rejected incorrect judgements in both grammatical and ungrammatical sentences. It suggests that all participants performed well in word order. It means all participants are already good at word order and therefore, there is no correlation between proficiency scores and word order. The reason behind why there is no correlation between proficiency scores and word order is greatly based on the procedure of participant collection. The experiment did not include participants from a varied proficiency level. In other words, the experiment did not include the beginners. All the participants included in the experiment were from similar level and had more than eight years of exposure in English. Therefore, most participants did not have problems to identify the basic word order in English; as a result show good performance in L2 acquisition of English word order regardless of proficiency score.

9. Summary and Conclusion

The thesis has been concerned to examine and explain what linguistic features and constructions are easy or difficult to acquire in second language (L2). Accordingly, it has tested the bottleneck hypothesis (Slabakova, 2006; 2008) in L2 acquisition of English by Nepali learners. Bottleneck hypothesis (Slabakova, 2006; 2008; 2013), predicts that the functional morphology is the bottleneck of L2 acquisition, and therefore, one of the most difficult phenomena for the second language learners. The findings of the study support the Bottleneck hypothesis. The results in section 7 show that subject-verb agreement is more difficult than word order. It suggests that the acquisition of functional morphology is more difficult than syntax in L2 acquisition of English. The findings of this thesis are further supported with the study of Jensen (2016) as in her thesis; Jensen (2016) reports that subject-verb agreement is significantly more difficult than verb movement in acquisition of English L2 by Norwegian speakers.

The thesis mainly included two constructions: subject-verb agreement and word order. Subject-verb agreement has been to test the knowledge about functional morphology while word order has been used to test the knowledge about syntax. Typologically, English and Nepali represent two different languages and follow a distinct linguistic system. Because of the distinct linguistic system, the two grammatical constructions (i.e. agreement and word order) are considered in the study. Both languages reveal overt agreement system but differ in inflectional system. Consequently, English verbs inflect to show contrasts for number, person and tense only while in addition to number, person and tense, Nepali verbs are inflected for gender and honorifics as well. Moreover, the inflection system in Nepali is rich and fairly complicated compared to English creating considerable mismatch between the two languages. In addition, Nepali is a verb final language which follow a basic word order of SOV(Aux). Structurally, Nepali verbs do not have the system of verb movement. In contrast, the verbs in English usually occur after the subject following quite rigid basic word order of SVO (subject-verb-object).

The main test includes 46 test items in total, out of which 10 are fillers. The test includes simple declarative main clauses with lexical verbs and all of them begin with DP subjects. Accordingly, subject-initial declarative sentence in simple past tense form tests word order

(syntax) while subject-verb agreement (functional morphology) is tested by subject-initial declarative sentence with 3rd person singular and plural subject.

The experiment was based on an online survey method, Survey Gizmo which included an acceptability judgement test, a proficiency test and a background questionnaire. The experiment used acceptability judgement test as the main method to collect the required data. Dąbrowska (2010) argues that the acceptability judgement test is the most widely used quantitative method to judge speakers' intuitions about the well-formedness of sentences. In addition, the experiment included a subset of a Standardized Oxford Proficiency test which contain 40 multiple choice test items in order to examine the proficiency level of the participants along with a set of background questionnaires. A total of 48 participants are included between the age of 15 and 18.

The study is restricted only within two grammatical constructions: functional morphology and syntax. Therefore, in this thesis, performance of Nepali learners between functional morphology and syntax were compared to examine whether functional morphology or syntax is the most difficult part in L2 acquisition of English. The results suggest that participants displayed more problems with English subject-verb agreement including both singular and plural subjects. However, agreement with plural subjects seems to be more problematic condition (Urano, 2008; White, 2001). Most error type occurred in the participants' judgement were omission and addition of the 3rd person singular suffix *-s* in agreement with both singular and plural subjects.

Based on this, it is concluded that Nepali learners of English face great difficulties in acquisition of subject-verb agreement due to the great differences between the verb inflection system of English and Nepali. Such a finding supports the claim that learning a poorly inflected language like English might become problematic for the learners from richly inflected languages like Nepali. Such linguistic variation may delay the process of acquisition making it longer to achieve high levels of accuracy for learners (Morales, 2014).

The result shows that the participants displayed good performance in word order acquisition although English and Nepali are structurally different languages. Furthermore, findings of the current study report that there are no evidences of transfer of word order from Nepali to English though there very few inconsistent incorrect judgements. Based on the discussion

above, it can be concluded that the acquisition of English word order might be difficult for the beginners and low proficient learners but not for the high proficient learners.

These observations indicate that learning the rule of subject-verb agreement is more difficult than learning the basic word order in L2 acquisition of English by Nepali learners. This is supported by the findings in previous studies, such as Haznedar (2001), Ionin and Wexler (2001) and Lardiere (1998a; b), who all found that the accuracy rate of syntactic phenomena is higher than the accuracy rate of verbal inflection. It means that L2 learners of English are more accurate with syntactic phenomena in obligatory contexts compared to morpho-syntactic phenomena related to the same functional category. Based on the discussion above, the data show that acquisition of the syntactic features is easier than functional morphology related to it supporting the view of *syntax before morphology* which argues against *morphology before syntax* view.

Further, the correlation between proficiency scores and constructions (agreement and word order) shows how performance of the participants develops. Accordingly, subject-verb agreement shows a weak correlation. It suggests that all participants judge the sentences similarly, regardless of their proficiency score. It means acquisition of agreement is equally difficult for all participants and therefore, performance in agreement does not increase as the proficiency score increases. In contrast, there is no statistically significant correlation between proficiency scores and word order. In addition, all participants performed well in word order. It means all participants are already good at word order. The reason behind why there is no correlation between proficiency scores and word order is greatly based on the procedure of participant collection which can be a fruitful suggestion for further research. The experiment did not include participants from a varied proficiency level. All the participants included in the experiment were from similar level and had more than eight years of exposure in English. Therefore, most participants did not have problems to identify the basic word order in English; as a result show good performance in L2 acquisition of English word order regardless of proficiency score.

To sum up, Bottleneck hypothesis predicts that functional morphology is the bottleneck in L2 acquisition and therefore, functional morphology is harder than syntax. The Hypothesis further posits that performance in syntax makes a developmental jump as the proficiency score increases, while acquisition of functional morphology develops slowly. In this regard,

my findings also show that subject-verb agreement in L2 English is harder than word order. On the other hand, most of the participants in my study performed well regardless of their proficiency scores as I included the participants who already had more than 8 years of exposure in target language. The participants do not show any developmental jumps as the proficiency score increases; instead most of them are already very well in L2 word order. Therefore, the study gets weak support from Bottleneck Hypothesis. In this regards, it is suggested that a varied range of participants regarding age groups and grade levels including beginners should be included in further experiments. Furthermore, the results show implication to language teaching as it discusses the difficulty of subject-verb agreement in L2 acquisition.

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Appendix 1

The acceptability Judgement Test

Welcome!

On the following pages, you can see some sentences in English. We would like you to make a judgement whether the given sentences are good or bad. For this, each sentence has a rating scale from 1 to 4. Your job is to rate each sentence using the given options.

1= very bad

2=bad

3=good

4=very good

1 2 3 4

Here are two examples showing how to rate a given sentence. If you think the sentence is very bad, you click on option 1 and if the sentence is very good click on option 4. If you are not completely sure, use the other two options (2, 3).

Play the little boy a ball.

1 2 3 4

The teacher presents his lesson.

1 2 3 4

The acceptability judgement test

1. The girl drives to work every Wednesday morning.

1 2 3 4

2. The cats play with green and yellow balls.

1 2 3 4

3. The boy wrote a letter last week.

1 2 3 4

4. Writes sister a letter the.

1 2 3 4

5. The teachers give their students a lot of home works.

1 2 3 4

6. The poet a poem wrote last year.

1 2 3 4

7. The brown dog play with the yellow football.

1 2 3 4

8. The sisters walks in the forest.

1 2 3 4

9. Car the an old man hit.

1 2 3 4

10. The little girl cooked her food carefully.

1 2 3 4

11. The parents help their children.

1 2 3 4

12. The sisters walk in the forest.

1 2 3 4

13. The boy swims in the ocean.

1 2 3 4

14. The dog chased a cat quickly.

1 2 3 4

15. Sings beautiful lady a song the.

1 2 3 4

16. The students sits in the park after school.

1 2 3 4

17. The student reads books about football.

1 2 3 4

18. The brothers attends football practice every day.

1 2 3 4

19. The boy a letter wrote last week.

1 2 3 4

20. Met his friend little the boy.

1 2 3 4

21. The worker a house built in January.

1 2 3 4

22. The teacher eat fish for dinner every day.

1 2 3 4

23. The cats plays with green and yellow balls.

1 2 3 4

24. The poet wrote a poem last year.

1 2 3 4

25. The brothers attend football practice every day.

1 2 3 4

26. The worker built a house in January.

1 2 3 4

27. Drinks glass a water the little girl.

1 2 3 4

28. The girl her hands washed slowly.

1 2 3 4

29. The boy swim in the ocean.

1 2 3 4

30. The students sit in the park after school.

1 2 3 4

31. The dog a cat chased quickly.

1 2 3 4

32. The teachers gives their students a lot of home works.

1 2 3 4

33. English the teacher students teach.

1 2 3 4

34. The student read books about football.

1 2 3 4

35. The girl drive to work every Wednesday morning.

1 2 3 4

36. The girl washed her hands slowly.

1 2 3 4

37. The teacher eats fish for dinner every day.

1 2 3 4

38. Car the an old man hit.

1 2 3 4

39. The brown dog plays with the yellow football.

1 2 3 4

40. sits man old the on chair the.

1 2 3 4

41. The little girl her food cooked carefully.

1 2 3 4

42. The parents helps their children.

1 2 3 4

43. passed girl her exam the.

1 2 3 4

44. The girl drinks a lot of water every day.

1 2 3 4

45. The girl drink a lot of water every day.

1 2 3 4

46. Work the finished the worker.

1 2 3 4

Appendix 2

The Standardized Oxford Proficiency test

Instructions: Please complete the sentences by selecting the best answer from the available answers below.

1) Water _____ at a temperature of 100° C.

- is to boil
- is boiling
- boils

2) In some countries _____ very hot all the time.

- there is
- is
- it is

3) In cold countries people wear thick clothes _____ warm.

- for keeping
- to keep
- for to keep

4) In England people are always talking about _____.

- a weather
- the weather
- weather

5) In some places _____ almost every day.

- it rains
- there rains
- it raining

6) In deserts there isn't _____ grass.

- the
- some
- any

7) Places near the Equator have _____ weather even in the cold season.

- a warm
- the warm
- warm

8) In England _____ time of year is usually from December to February.

- coldest
- the coldest
- colder

9) _____ people don't know what it's like in other countries.

- The most
- Most of
- Most

10) Very _____ people can travel abroad.

- less
- little
- few

11) Mohammed Ali _____ his first world title fight in 1960.

- has won
- won
- is winning

12) After he _____ an Olympic gold medal, he became a professional boxer.

- had won
- have won
- was winning

13) His religious beliefs _____ change his name when he became a champion.

- have made him
- made him to
- made him

14) If he _____ lost his first fight with Sonny Liston, no one would have been surprised.

- has
- would have
- had

15) He has traveled a lot _____ as a boxer and as a world-famous personality.

- both
- and
- or

16) He is very well known _____ the world.

- all in
- all over
- in all

17) Many people _____ he was the greatest boxer of all time.

- is believing
- are believing
- believe

18) To be the best _____ the world is not easy.

- from
- in
- of

19) Like any top sportsman, Ali _____ train very hard.

- had to
- must

should

20) Even though he has now lost his title, people _____ always remember him as a champion.

would

will

did

21) The history of _____ is

airplane

the airplane

an airplane

22) _____ short one. For many centuries men

quite a

a quite

quite

23) _____ to fly, but with

are trying

try

had tried

24) _____ success. In the 19th century a few people

little

few

a little

25) succeeded _____ in balloons. But it wasn't until

to fly

in flying

into flying

26) the beginning of _____ century that anybody

- last
- next
- that

27) _____ able to fly in a machine

- were
- is
- was

28) _____ was heavier than air, in other words, in

- who
- which
- what

29) _____ we now call a 'plane'. The first people to achieve

- who
- which
- what

30) 'powered flight' were the Wright brothers. _____ was the machine

- His
- Their
- Theirs

31) which was the forerunner of the Jumbo jets and supersonic airliners that are
_____ common

- such
- such a
- some

32) sight today. They _____ hardly have imagined that in 1969,

- could
- should
- couldn't

33) _____ more than half a century later,

- not much
- not many
- no much

34) a man _____ landed on the moon.

- will be
- had been
- would have

35) Already _____ is taking the first steps towards the stars.

- a man
- man
- the man

36) Although space satellites have existed _____ less

- since
- during
- for

37) than forty years, we are now dependent _____ them for all

- from
- of
- on

38) kinds of _____. Not only

- informations
- information
- an information

39) _____ being used for scientific research in

- are they
- they are
- there are

40) space, but also to see what kind of weather _____.

- is coming
- comes
- coming

Appendix 3

Background questionnaires

1. How old are you?

2. In which grade you study?

3. Which language do you speak at your home?

4. Which language do you speak at school?

5. Which language do you speak with friends?

6. When did you start learning English? Age and grade?

Thank You!