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Faculty of Humanities, Social Science and Education
Code-Switching in Multilinguals: A Narrative Elicitation Study with L1
Arabic, L2 English, L3 Norwegian Speakers.
The Role of Cognates, Dominance and Typological proximity
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## List of Abbreviations

Ar- Arabic

Ar.CSRs- Arabic code-switch responses

Ar.NonCog.CSRs- Arabic non-cognate responses
CSRs- Code-switch Responses

CogRs- Cognate Responses
Eng- English
EngCogRs- English Cognate Responses
Eng.NonCog.Rs Endlish- Non-Cognate Responses

EngNs- English Narratives
M.CSRs- Multiple code-switch responses

Mor.CSRs- Morphological and Morphosyntactic code-switch responses
N- Narrative

Nor- Norwegian
Nor.CSRs- Norwegian
Nor.Cog.CSRs- Norwegian Cognate Code-switch Responses

Nor.NonCog.CSRs- Norwegian Non-Cognate Code-switch Responses

NorNs- Norwegian Narratives

Par- Participant

PDT- Picture descriptive Task

T- Total
T.Ar.CSRs- Total Arabic code-switch responses
T.Ar.NonCog.CSRs- Total Arabic non-cognate responses
T.CSRs- Total code-switch responses
T.CogRs- Total cognate responses
T.EngCogRs- Total English Cognate responses
T.Eng.NonCog.Rs- Total Endlish non-cognate responses
T.M.CSRs- T.Multiple code-switch responses
T.Mor.CSRs- Total Morphological and Morphosyntactic code-switch responses
T.Nor.CSRs- Total Norwegian Code-Switch responses
T.Nor.Cog.CSRs- Total Norwegian Cognate Code-switch Responses
T.Nor.NonCog.CSRs- Total Norwegian Non-Cognate Code-switch Responses
T.NorNs- Total Norwegian Narratives
T.Par- Total Participants

## 1 Introduction

This study will investigate two patterns related to code-switching: the insertion of cognates and the directionality of the code-switch. These patterns will be investigated in multilinguals who speak Arabic L1, English L2, and Norwegian L3. This study considers semi-naturalistic speech samples produced by the participants.

Cognates are words that share form and meaning. In addition, they could be almost identical such as bank in English and bank in Norwegian or cat in English and katt in Norwegian. With regard to language acquisition, many studies have shown that learners acquire cognates faster than non-cognates. Moreover, substantial evidence in the literature indicates the relation between cognates and code-switches (see Clyne, 1967). This relation was introduced as the facilitation effect of cognate.

Regarding the directionality of the switch, there is a very limited number of studies on this topic in the literature. However, the direction in several studies on bilinguals (e.g., Patuto et al., 2014; Cantone, 2007) and multilinguals (Poeste, Mülller, Arnaus Gil, 2019) was explained by the strong effect of language dominance. It is assumed that there is typically at least one weak language among the multilingual's languages (Hoffman, 2001). It is then claimed that language dominance influences the direction of the code-switch. Specifically, it is believed that the switch in the direction of the dominant language.

Aside from the relatively few studies on code-switching in multilinguals, most of these studies were conducted in languages or dialects that share many similarities. Research that focused on the code-switching behavior in multilinguals, who speak at least one language that is not typologically related to the others, is very scarce. This study sets out to investigate how the typological proximity/similarity would affect the insertion of cognates in multilinguals who speak L1 Arabic, L2 English, and L3 Norwegian. Additionally, the phenomenon of codeswitching was intensively studied in bilinguals, where the direction of the switch was easy to predict. However, there were only a few studies with trilinguals and multilinguals which investigated the direction of code-switching. These studies mainly focused on the direction from L1 and L2 to L3 based on dominance.

In this study, we have three different languages: L1 Arabic, which is supposed to be the most dominant and thus is expected to be the source of inserted code-switches according to various studies on bilinguals. In addition, L2 English, which has been acquired and practiced by the participants at a relatively young age, and L3 Norwegian, which has been required more recently and is the community language of the participants. An unpublished case study on these three languages by Holst (2019) showed that there were code-switches from L3 into L2, but almost no code-switch instances were observed from L1 Arabic. Therefore, we will try to further investigate the effect of language dominance on the direction of the cross-linguistic influence.

The following chapter (chapter 2 ) will provide a theoretical background about code-switching of the cognates and the role of dominance. Thereafter, the methodology of the present study will be described in chapter 3. In chapter 4, the obtained results will be presented and described. A discussion of the results will be provided in chapter 5, followed by a conclusion in chapter 6.

### 1.1 Research question and expectations

Two main questions motivated this study: Question 1: Is it the co-activation effect of the cognates that makes them more likely to be code-switched than non-cognate?

As discussed earlier, cognates are believed to be inter-connected in the mental lexicon more strongly than non-cognates (Broersma \& De Bot, 2006, 2009, see also De Groot \& Van hell, 1998). This strong connection could be attributed to similarities cognates share in both form and semantics. It has also been proved that the lexical overlap highly influences the crosslanguage processes and code-switching. Broersma (2009) discussed that unconsciously codeswitched utterances could occur under the influence of cognates since cognates have been considered a trigger to code-switch. Carrying over these findings and observations to this study, we would predict that the potential to code-switch cognates is higher than the potential to code-switch non-cognates.

Question 2: What could have more influence on the direction, the dominance, or the typological proximity?

We predict that there will be code-switches from all three languages. However, it may happen that only one of the languages will be the strongest donor. As we previously mentioned, cognates play an essential role in favor of the activation and facilitation of code-switching. In Broersma (2006), the 3 Moroccan-Arabic speakers did not produce many cognates responses. Only $4,7 \%$ were scored as cognates, and the majority of the code-switched cognates were proper nouns. The low percentage of the code-switched cognates was likely due to the fact that Arabic and Dutch belong to two different language families. In other words, these two languages are not as coactivated due to the lack of typological similarities. Accordingly, we will not expect that participants will produce cognates from their L1 (dominant language). Therefore, there may be a low activation in this language (Arabic). Unlike Arabic, Norwegian and English would be more activated since they share many cognates. This means that the activation level may be much stronger between L2 and L3 than in the L1-L2 or in the L1-L3 pairs.

We can hypothesize that the direction of code-switching between L1, L2, and L3 may be influenced by either language dominance or typological similarity. Regarding the direction of code-switching between English and Norwegian, we would predict that dominance may also influence the direction between these two languages. These languages are typologically similar, and a high number of cognates may contribute to the activation of both languages. Accordingly, we expect that the strongest (i.e., most dominant) language among these two will be the strongest doner. In other words, if the L2 is the most prevalent, the code-switched response with English as the donor will outnumber the code-switched responses with Norwegian as the donor.

## 2 Background and Theoretical Framework

### 2.1 What is Code-Switching

When code-switching emerged as a new linguistic phenomenon, the definition of codeswitching was debatable among scholars and linguists. In the literature, there is a variety of definitions trying to explain this phenomenon. Myres-Scotton (1993b) defined code-switching as an " alternation of linguistic varieties within the same conversation" (p.1). Gumperz (1982)
also referred to the same term as a "juxtaposition within the same speech change of passages of speech belonging to two different grammatical systems" (P. 59). According to Wardhaugh (1986), the phenomenon of code-switching occurs "when a speaker requires a particular code, in order to mix or switch one code to another and even create a new code in process" (P. 101). Moreover, Hoffman (1991) argued, in favor of the occurrence of code-switching, that "codeswitching can occur quite frequently in an informal conversation among people who are familiar and have a shared ethnic, socio-economic, and educational background. It is avoided in a formal speech situation among people especially to those who have little in common factors in terms of social status, language loyalty, and formality" (cited in Cakrawarti, 2011, P.7). At the same time, the occurrence of code-switching does not seem arbitrary or random contra to what was concluded by Labov (1971). Labov claimed that "no one has been able to show that such rapid alternation is governed by any systematic rules or constraints and we must therefore describe it as the irregular mixture of two distinct systems" (Labov, 1971, as cited in Boztepe, 2003, P. 5). Boztepe (2003) claimed that there are few if any studies (at the time of his study) that refer to code-switching as a random linguistic behavior or that it leads to semilingualism. On the contrary, available studies revealed that code-switching constitutes the norm in many stable bilingual communities, and "satisfaction of this norm requires considerably more linguistic competence in two languages" (Poplack, 1980, in Boztepe, 2003, P. 11). Accordingly, there are grammatical constraints by which this occurrence is governed in the language used by the speaker. Based on this assumption, Gluth (2008) discussed that the bilingual's fluency depends on whether the bilingual follow these grammatical constraints or not. In other words, a bilingual will be fluent when he/she follows these grammatical constraints but not fluent when he/she does not (cited in Al Abdely and Al Heeti, 2016).

Two broad frameworks that count for an alternate use of two languages (or more) include a so-called sociolinguistic and a so-called structural accounts. The sociolinguistic approach focuses on questions related to the discourse function that code-switching serves and the creation of the social meaning in code-switching. It also tries to illustrate why bilinguals speak the way they do. On the other hand, the structural approach focuses on investigating the grammatical aspects of code-switching, trying to identify the morphosyntactic and syntactic constraints of code-switching. In addition, it tries to identify the structural features of morphosyntactic patterns underlying the grammar of code-switching (Boztepe, 2003). Based on different studies within the structural and sociolinguistic approaches in code-switching,

Boztepe made some observations. In relation to the structural approach, he discussed two different types of models: symmetrical models of alternation and symmetrical models of insertion. In the former models, code-switching is explained in terms of word order equivalence, whereas the latter discusses that the languages involved in code-switching do not show the same degree of participation. However, these models show some differences due to the different typological characteristics of the language pairs. With regard to the sociolinguistic approach, the discussion was built on the characteristics of the tension between macro- and micro-sociolinguistic. The macro-perspective suggests societal norms which are associated with specific types of activity. On the other hand, the micro-perspective sees codeswitching as a strategic "tool at the disposal of speakers through which social reality is created, and conversational functions ranging from signaling dual membership in the two communities to simply emphasizing a message are conveyed" (Boztepe, 2003, P. 21).

### 2.1.1 Type of code-switching

There are different suggested types of code-switching described by scholars who tried to come up with a typological framework of this phenomenon. Gumperz and Bolm (1972) classified two types of code-switching according to the distinction which applies to styleshifting: situational and metaphorical. The former type occurs when the speaker changes the languages based on the situation they find themselves in. In other words, the conversant speaks one language in a certain situation, and he/she changes the language in another situation (Wardhaugh, 1986). The latter type occurs when the interlocutors change the language they use based on the change in topic. Saville-Torike (1986) provided an explicit definition of the metaphorical type, stating that " a metaphorical code-switching as a codeswitching occurring within a single situation but adding some meaning to such components." (in Cakrawarti, 2011, P. 7). Moreover, Poplack (1980) identified three different types of switching: Inter-sentential Code-Switching, Intra-Sentential Code-Switching, and Tag Switching. I will present them one by one.

1. Inter-sentential Code-switching: this type of code-switching occurs at the clause or sentence boundaries. This means that an interlocuter produces a sentence or a clause in one language, but the next clause or sentence will be in another language. According to Eldin (2014), this type of code-switching involves fluency in both languages, where the interlocutor will be able to follow the rules of both languages.
2. Intra-sentential Code-Switching: This type occurs within a sentence. Poplack (1980) considered this type as the most complicated type among these three types. The reason for this complexity, as Poplack stated, is that it is possible for inter-sentential codeswitching to occur at sentential, clausal, and word level.
3. Tag Code-Switching: this type is considered the easiest type of code-switching to occur. The reason for the easy occurrence is that tags typically do not contain a lot of syntactic constraints. This type entails inserting a short phrase of a tag from one language into an utterance in another language. Tags include fillers, interjections, and idiomatic expressions.

Nevertheless, some researchers (e.g., Muysken, 2000) refrained from using the term codeswitching as a cover term. There are also other scholars (e.g., Kachru, 1983; Singh, 1985) who prefer to use the term code-switching when they only discuss inter-sentential switches, whereas they use code-mixing when they discuss intra-sentential switches. The reason for this is that "only code-mixing requires the integration of the rules of the two languages involved in the discourse." (Boztepe, 2003, p. 4). Hoffman (1991) presented different types of codeswitching and code-mixing and built this classification on the scope of switching or the juncture where code-switching takes place (p. 112). According to Hoffman, the different types of Code-Switching include Inter-sentential Code-Switching, Establishing Continuity with the Previous Speaker, and Emblematic Switching. At the same time, Hoffman grouped Intra-sentential Switching/ Code-Mixing, Intra-lexical Code-mixing, and Involving a Change of Pronunciation under Code-Mixing.

Taking the above-mentioned studies into account, we will follow Boztepe (2003) and use the term "code-switching" as a cover term because "the structural constraints are concerned, the intra- vs. inter-sentential distinction can equally well distinguish the two types of switches." (p. 5).

### 2.2 L3 Acquisition

Smith (1994) defined the cross-language influence as "the influence of any other tongue known to the learner on the target language" (Smith, 1994, p.198). Smith's study is one of the multiple studies which focus on the role of previously learned languages on the acquisition of a subsequent language. Despite the various studies that discuss bilinguals' advantage of
learning a new language over monolinguals, studies that focus on the role of non-native languages in L3 acquisition are relatively rare. The few studies in L3 acquisition have primarily focused on the intentional switches. It has been noticed that the majority of the switches are function words, and there are more switches from L2 than the ones from L1. In Ringbom (1987), the observations to this effect were made based on a corpus data of lexical errors in 11000 written English essays. The essays were written by students who speak Finish as the L1, Swedish as the L2, and English as the L3. According to the corpus data, there were 187 instances from Swedish (L2) and only 8 instances from Finish (L1). Moreover, 125 / 187 (67\%) were identified as content words as opposed to 62 / 187 ( $33 \%$ ) that were identified as function words. According to the findings of Ringbom's study, most of the frequently codeswitched words were clause connectors such as och "and" (8 instances), fast "although" (13 instances), and men "but" ( 10 instances). Although the previously mentioned connectors have a different meaning in Swedish, Ringbom suggests that their existence in English and the writers' lack of attention to form are the reason for their frequent occurrence in the English texts.

Another study by Stedje (1977) also showed that there were more instances of language switch from L2 into L3 than from L1 to L3. Participants in Stedje's study spoke Finish as L1, Swedish as L2, and German as L3. They learned Swedish in Finland, and none of them had lived in Sweden for more than four years. The produced instances were more likely nonintentional responses because Stedje noticed that participants immediately corrected the produced Swedish words in the German context. The study showed that there were more instances of language-switch from Swedish L2 to German L3 than L1 Finish to L3. She found that the occurrence of the Swedish function words is frequent, and there were no instances of language switches from Finish L1. Stedje attributed such occurrences to the typological similarities. While Swedish and German belong to the same language family, Finish, on the other hand, belongs to a different one. However, the most interesting finding in her work was that non-intentional language switches from Swedish L2 in the Finish students were more frequent than in Swedish students with L1 Swedish. This may indicate to the fact that the occurrence of non-intentional language switches from L2 Swedish may have to do with both language typology as well as the L1/L2 status of the languages involved (Stedje, 1977, in Williams and Hammarberg, 1998, P. 13-14).

Considering the above-mentioned literature, we noticed that these studies mostly examined the cross-linguistic effect of L1 or L2 on L3. However, there is also evidence for a potential effect of the weaker language on the stronger previously learned ones. In other words, the effect of L3 onto the L1 and L2. These kinds of studies are still scarce, and few investigations have been conducted to test. Nevertheless, evidence of the effect of the weaker language onto the stronger ones was reported in studies examining bilingual speakers. Cook (2003) called the linguistic transfer from the weaker language into the stronger one reverse transfer.

One of the studies on the effect of the L2 on L1 was conducted by Masciantonio (1977), where he studied two groups of children. One group included children who spoke English as L1 and learned classical Latin as L2, whereas the second group included children who did not speak a foreign language. Masciantonio found that Latin had a positive effect on the English vocabulary. In a similar vein, Cunningham and Graham (2000) investigated the effect of L2 Spanish (learned in an immersion context) on L1 English. They found that there was a cognate facilitation effect from L2 Spanish onto L1 English. This effect led to increased L1 vocabulary size.

### 2.3 Cognate's Facilitation in Language Acquisition

Many researchers (e.g., Marian and Blumenfeld, 2007) argued that translating and processing cognates vs. non-cognates have advantages in acquiring a new language. In general, learners of a new language tend to encode new words for concepts they know in their first language (Kohnert and Kelley, 2012). Marian and Bartolotti (2016), proposed that a person has to understand $98 \%$ of the words of a written text in order to understand that text fluently (p. 111). For example, in an average non-adapted English text, $98 \%$ coverage means that the learner needs to have a vocabulary of about 8000-9000 words, excluding the inflected forms. According to these facts and numbers, we can imagine how challenging it maybe to learn a new language and a new vocabulary. At the same time, Pyles and Alego (1993) argue that the process of acquiring a new language could be facilitated if the target language is derived from the same ancestral language, where a lot of cognates are shared (see example 1).

Example (1): Katten liker å drikke melk.

Cat-DEF like-PRS to drink milk.
"The cat likes to drink milk"

In this example, we notice that most of the words are very similar, almost identical (Kattencat, liker-like, drikke-drink, melk-milk). They are similar in meaning and pronunciation. If an English-speaking person, who has no background or knowledge about the Norwegian language, reads this sentence, he/she would be able to decipher many words and understand what this sentence is about. Nevertheless, deciphering words could be easier in a written form than in an oral form. The oral form could be more challenging due to some differences in pronunciation or stress placement. Such patterns, according to Kohnert and Kelley (2012), can cause a bigger gap between the cognates in the spoken domain than in the written (in Telstad, 2018). For example, the words drikke-drink are orthographically and phonologically adjacent to each other. However, there are still some phonological differences in these two words.

Sanchez-Casas and Garcia-Albea (2005) conducted an experiment where they examined the visual recognition of the translations of cognates and non-cognates. A lexical decision task and a priming paradigm were used to test Spanish-English and Catalan-Spanish bilinguals. The experiments showed that despite phonological differences between some cognates, they were, however, faster to be acquired compared to non-cognates. Lijewska and Chmiel (2014) called the individual's ability to discern the meaning of an unfamiliar word in one language using knowledge of another as cognate facilitation (cited in Telstad, 2018). The cognate facilitation effect is a boost for language acquisition, has been discussed in many different studies (see Grainger, Peeters \& Dijkstra, 2013; Bartolotti \& Marian, 2016). To this effect, Costa, Garamazza, \& Sebastian-Galles (2000) conducted a study in Catalan-Spanish bilingual children using a picture-naming task. The experiment showed that children were faster to name cognates than non-cognate. According to these findings, it is generally believed that the cognates in a novel language are easier to be stored and retrieved from the mental lexicon than non-cognates.

### 2.4 Cognates in The multilingual lexicon

The existence of cognate pairs in two languages can be due to language contact (through borrowing from one language to another) or etymological (Szubko-Sitarek, 2015). SzubkoSitarek mentioned two types of cognates: identical and not identical. She claimed that the not identical cognates experience phonological changes in each language. Nevertheless, cognates in psycholinguistics are defined according to processing rather than etymology. Dijkstra (2005) argued that cognates with strong semantic and orthographic links across the two languages might have a special status in the multilingual lexicon. According to the Bilingual Interactive Activation Model (BIA+) by Dijkstra and Van Heuven (2002), cognates have an integrated representation across the bilingual's two languages. Dijkstra (2019) discussed four sources from which the facilitation effect of cognates stems. Dijkstra's discussion is based on assumptions of two models: the revised Hierarchical Model by Kroll and Stewart (1994) and the BIA+ model. According to Dijkstra (2019), the first source the cognates' facilitation effect is the overlap in input orthography, the second is the shared morpho-semantics, the third is the co-activation of their phonological representations through semantics during word production, and finally, the fourth source is the spreading of activation within the language from orthographic representations to their phonological representations. Poarch and Van Hell (2012) emphasized the importance of cognates when studying the bilingual lexicon. They stated that the use of cognates in bilingual studies allows the researchers to observe the influence of the other language in a language-exclusive setting. The difference between the responses to cognate vs. controls during reading can be considered evidence of how different languages affect each other (Szubko-Sitarek, 2015). The cognate facilitation effect was observed in different studies; specifically, it has been reported that cognates are processed faster than non-cognates. This effect is considered an evidence for "an integrated multilingual lexicon and parallel lexical access, where word candidates are activated cross several languages (Szubko-Sitarek, 2015, in Toassi, Mota \& Teixeira, 2020, P. 78).

### 2.5 Cognates' effect on Code-switching (CS)

### 2.5.1 Cognate's activation and a facilitative effect for CS

According to Gumperz and Blom (1972), pragmatic and social considerations are important to the occurrence of code-switching. They also discussed that the presence of cognates could influence the place at which code switches occur. Additionally, Broersma (2009) and other
scholars argued that in some situations where it feels possible to code-switch, the code switches produced by speakers may not be consciously planned, but they could occur due to the influence of the cognates. This influence could be attributed to the fact that cognates in the two languages might be strongly connected in the mental lexicon due to the similarities they share in both form and meaning (Broersma and De Bot, 2006). There is strong and growing evidence that indicates a correlation between cognates and code-switching. Clyne (1967) was one of the earliest scholars who highlighted the relation between cognates and codeswitching. To further investigate his observations on this issue, Clyne studied a wide number of immigrants in Australia. He noticed the frequent co-occurrence of cognates and codeswitches among bilinguals as well as trilingual (Clyne, 2003). Soto, Cestero, and Hirschberg (2018) have also conducted an experiment trying to find out which contextual, and the linguistic stimuli are more likely to trigger code-switching. In their experiment, they tested three different hypotheses, one of which discussed the direct correlation of cognates as stimuli to Code-Switching. The lexical database they used to test these hypotheses was made of cognate pairs between English and Spanish. The statistical significance tests they used on a corpus of conversational Code-Switched English-Spanish, revealed that "cognates and switches occur simultaneously in the same utterance and that cognates facilitate switching" (Soto et al., 2018, p. 1).

It is typically assumed that the activation or the processing of the lexicon, in terms of codeswitching, is language non-specific. This assumption was based on multiple studies, among them Schwartz and Van Hell (2012), where the researchers show that the mental lexicons of bilinguals are not stored separately but in an integrated fashion. Bultena (2013) argued that the co-activation between languages occurs when a word in a language simultaneously activates word(s) from one language share phonological, semantic, and orthographic features with words from other languages. However, when the languages are co-activated, this does not mean that the level of activation is the same. Bultena et al. al. (2014) argues that the imbalanced degree of activation between languages leads to a cognitive exertion with codeswitching from one language to another. According to Kootstra (2009) and Isurin, Broersma \& De Bot (2009), the lexical overlap across languages has a high influence on cross-language activation processes and code-switching.

In several studies, the processing of cognates has been studied in order to investigate the cross-language activation at the lexical level. Van Hell and Dijkstra (2002) studied the
cognate facilitation effect in three languages: Dutch (L1)-English (L2)- French (L3). The participants of this study were divided into two groups. The first group included participants whose proficiency in French was relatively low, whereas the participants in the second group were more fluent in French compared to those in the first group. In addition, participants in the second group had the same level of proficiency in both English and French. Two different tasks were used in that study: a Lexical Decision Task and a Word Association Task. Both tasks were used in experiment 1 and 2 where participants with low proficiency in French were included. The results from these two experiments showed a cognate facilitation effect in words that were cognate with English (L2). However, this facilitation was not observed in words that were cognate with L3. Moreover, same materials used in Experiment 3, where participants had a relatively equal level in both L2 and L3. The result from this experiment revealed that the cognate effect increased not only in words that were cognate with L2 but also in words that were cognate in L3 (see also Lemhöfer et al. 2004). The cognate facilitation effect in bilingual speakers has been discussed and observed in further studies (see Costa et al. 2000; Van Hell \& De Groot, 1998). These studies revealed that the occurrence of the cognate facilitation effect increases the cross-language activation in language production. These studies have one thing in common. As we noticed in the study of Van Hell and Dijkstra (2002), the included languages were Indo-European which means that they were typologically related. In the present study, one of the languages we included (L1 Arabic) is typologically very different from L2 English and L3 Norwegian, and the occurrence of cognate and the role of proficiency in this context has not been discussed yet.

Furthermore, in a study conducted by Lemhöfer and Dijkstra (2004), it was noticed that the processing of cognates and non-cognates was different in bilingual speakers. The same observation was also made for trilinguals (Dijkstra and Van Hell, 2004). Furthermore, De Groot and Van Hell (1998) discussed that the conceptual representations of non-cognates are not as tightly connected as in cognates. Accordingly, Paradis (2004) argues that at the lexical level, there is a possible change in the activation of two languages that could be caused by the selection of cognates. This change in activation could lead to boost the activation of the least active language. Broersma (2009) indicated the role of selection for the likelihood of codeswitching. He discusses that in a code-switching setting if a language is strongly activated, the extra activation might lead to tip that balance where the selected lemma might not be from the language that was spoken before but from that other language.

### 2.5.2 Cognates and lexical access

According to the models of speech production, many researchers (e.g., Caramazza, 1997, Bock, 1995, a.o) assumed that there are two stages in which lexical access proceeds. In the first stage, the lexical item that corresponds to an intended meaning gets activated and selected out of a set of activated lexical nodes. In the second stage, the selected item's phonological properties are retrieved, and the word is finally articulated (Caramazza, Costa and Galles, 2000: 1283-1292).

One of the most hotly debated questions regarding lexical access is whether words that overlap in form (phonological and orthographic) and semantic representations are only activated in the intended language or in all bilingual's languages. Various bilingual studies have discussed this question based on the perspective of selectivity and non-selectivity. According to the former view, the competition between lexical entries will be activated in the intended language. On the other hand, according to the latter view, the competition will be activated in both languages of the bilinguals. However, the perspective of selectivity and nonselectivity might not be the only constrain to lexical access. Szubko-Sitarek (2015) discussed context, frequency, and imageability as factors by which the lexical access can be constrained. Toassi, Mota, \&Teixeira (2020) suggested that if these factors could constrain the lexical access "it is possible that the greatest influence or the greatest number of activated lexical items will belong to the target language and little influence is expected from the other languages of the multilingual" (Toassi, Mota, and Teixeira, 2020, p. 76).

At the same time, in studies arguing for non-selective access, many experiments employed orthographic neighbors as stimuli. These studies showed that during the presentation of the target word, the neighbors (equivalents) from two different languages are activated. Based on these studies, Szubko-Sitarek (2011) concluded that this activation is evidence that the nodes in a bilingual lexicon are non-selective and integrated in nature. Moreover, Kroll and Jared (2001) conducted a word naming study. The result of their study showed the same effect regarding the activation of two lexica of bilinguals, particularly for the phonologically overlapping elements. The strongest results regarding the non-selective access stem from studies in which the Reaction Time (RT) test was used. Differences for interlingual cognates and homographs were reported in several experimental conditions. The findings from these studies (Nas and De Groot,1991; Lemhöfer et al.,2008, a.o) showed that cognates were faster
to be produced, translated, and recognized than non-cognates. The reason for the fast production, translation, and recognition of cognates is that the representation of cognates is based on form (phonological, morphological, and orthographical ) by which cognates used to be processed in two or more languages (Szubko-Sitarek, 2011). Kennison and Friel (2001) discussed how useful cognates are as tools in order to investigate the language non-specificity of lexical access and multilingual mental lexicon in bilinguals and multilingual (p.190). It is assumed that the representation of words in the multilingual lexicon can be determined by the distinction between cognates and non-cognates translation. As Dijkstra (2005) argued, this distinction is consequential for the processing of these types of words. Furthermore, Dijkstra and Lemhöfer (2004) conducted 4 experiments showing non-selective access. In an RT study, they tested bilinguals who spoke Dutch and English. They found that the participants' recognition of cognates was faster than that of interlingual homographs. They concluded that the effect of cognates can be attributed to the semantic overlap across languages. SzubkoSitarek (2011) suggested, based to these observations, that there was a co-activation of the semantics in both languages and that cognates are "represented in a special way, with a strong link between orthographic and semantic representation" (Szubko-Sitarek, 2011,p. 191).

Moreover, Szubko-Sitarek, (2011) set out to test the assumption of Dijkstra (2005) concerning the position of cognates in a trilingual lexicon. Using different versions of a lexical decision task, Szubko-Sitarek conducted two experiments in order to investigate the effect of the cross-linguistic overlap in semantics and orthography. This study revealed that in trilingual speakers, cognates were processed more accurately and quickly than non-cognate control words. Additionally, the result proved that the overlap of the form and meaning across languages facilitated lexical access. The results (in experiment .1) also showed that "processing the weakest language (L3) words entails parallel, automatic activation of candidate words in the strong dominant languages; not only L1 but also L2." (Szubko-Sitarek, 2011, p. 203).

### 2.6 The Matrix Language Frame model (MLF):

The MLF model was first introduced by Myers-Scotton (1993a). This model differentiates the morpheme types and bilingual's languages at a number of abstract levels (Myers-Scotton \& Jake, 2008). Additionally, this model emphasizes two asymmetries. The first asymmetry claims that only one language of a multilingual is the dominant one.

The dominant language is the matrix language (ML), and the weaker language is the embedded language (EL). According to Myers-Scotton's models, the Matrix language is identifiable. The ML can be the speaker's first language or the language that contains the most frequently used words and morphemes in a speech. Moreover, the MLF, according to Myers-Scotton and Jake, limits the role of the embedded language of providing EL phraselevel constituent or content morphemes in mixed constituents. In other words, we can say that the morphosyntactic frame code-switching is determined by the dominant role of the LM.

Example (2) ...en gutt som holder balloon ... (see Appendix F, Par: 31/N1)
... A-Masc boy who hold-Pres balloon ....

In example (2), Norwegian is the matrix language because it gives the sentence present tense in "-er" and gender agreement in "en." In addition, the Norwegian sentence in the example contains 4 morphemes: (en, gutt, som, holder), whereas there is only one morpheme from English (balloon).

The second asymmetry differentiates system and content morphemes and their role in CodeSwitching. The MLF model assumes that the earlier mentioned asymmetries apply universally in Classic Code-Switching ${ }^{1}$. Myers-Scotton and Jake (2008) point out that there is empirical evidence that largely supports this model.

To define the system and content morphemes, the MLF did not classify them based on the lexical and functional distinction or the open vs., closed class distinction. The MLF differentiates the system morpheme from the closed-classed items or the functional elements in other linguistic models. The system morphemes, according to MLF, is defined in position to content morphemes (Myers-Scotton \& Jake, 2008, p. 338). The content morphemes, on the other hand, are defined based on the thematic roles the system morphemes do not receive or assign. Myers-Scotton \& Jake introduced two main principles in the MLF model. These

[^0]principles were discussed in Myers-Scotton (1997, p. 82) as the System Morpheme Principle (SMP) and the Morpheme Order Principle (MOP).

- The System Morpheme principle (SMP): In ML + EL constituents, all system morphemes which have grammatical relation external to their head constituent will come from the ML.
- The Morpheme Order Principle (MOP): In ML + EL constituents consisting of singly occurring EL lexemes and any number of ML morphemes, surface morpheme order will be that of ML. (Myers-Scotton, 1993a, p. 83-120)

According to Myres-Scotton, these principles can be considered hypotheses that discuss the differing roles of the participating languages, and the Matrix language will be identified with the help of these principles.

### 2.7 The directionality of the switch

The directionality of the switches can be affected by different factors, including Language dominance and Typological similarity. The dominance's influence on code-switching had been extensively discussed for bilinguals. However, research on the role of dominance in multilinguals is relatively scarce. Previous studies showed that the effect of dominance on code-switching sometimes fails to count for the directionality. In such cases, the studies tend to involve explanation based on the typological proximity/similarity to predict the direction of cross-linguistic influence.

### 2.7.1 The role of dominance in language choice

Hoffman (2000, P. 88) argues that trilinguals and bilinguals have the ability to use language borrowing, mixing, and switching, with the only difference that trilinguals would involve three instead of two language systems. In addition, it is assumed that unbalanced bilingual children tend to mix more than balanced ones. In a similar vein, trilingual children are expected to mix languages more than bilinguals since it is even more difficult to find balanced trilinguals than balanced bilinguals. Chevalier (2015) noticed that trilingual children tend to acquire only one language as dominant. This language is usually the language of the community. At the same time, Müller et al.(2015) claimed that it is possible for a noncommunity language to be the dominant one, but she also pointed out that such cases are relatively rare.

In general, studies and observations related to the effect of dominance on the direction of the switch/mix in trilinguals and multilinguals are rare. Most studies have been conducted with bilinguals, and the role of dominance was often discussed as an influential factor on the frequency of intra- and inter-sentential code-mixing in children's language production at an early age. Patuto et al. (2014) conducted a longitudinal study involving bilingual children, and the results revealed that the rate of intra-sentential mixing in a monolingual mode was not very high. Based on this and previous studies, Patuto (2014) concluded that the intrasentential mixing is not significantly determined by the dominance factor. Schmeißer et al. (2016), on the other hand, argues that the dominance factor can matter if large pieces of discourse like turns, utterances, or sentences are taken into account. Moreover, Müller et al. (2015) obtained the same results as Patuto (2014) in a cross-sectional study on balanced and unbalanced bilingual children. Accordingly, it is possible that in early bilingualism, intersentential code-mixing is not directly related to language dominance. Nevertheless, Schmeißer (2016) suggests that the occurrence of intra-sentential mixing can be less frequent in some bilingual children than inter- sentential mixing. Furthermore, Stavans and Homffman (2007) conducted an experiment where two trilingual children were observed at different ages in their life. The authors quantified the amount of code-switching and code-mixing utterances over time. What the results revealed was that the number of code-mixed utterances was increasing as the children grew older. They suggested that the increasing number of codemixing utterances could be due to the increasing proficiency in the three languages because code-mixing requires pragmatic and functional appropriateness in addition to a deeper understanding of the formal aspects like lexicon, morphology, and syntax of each language (Stavans and Hoffman, 2007, p.61. cited in Poeste, Müller, and Arnaus Gil, 2019, p. 468). Chevalier (2015) and Hoffman \& Stavans (2007) observed that dominance can influence the directionality of the code-mixing, but there were, on the other hand, no indications to the dominance was a strong cause of code-mixing.

Ecke (2004) argued that the frequent usage of a language and its recency affect the dominance. This argument was based on different bilingual studies, in which code-switching was discussed as a compensatory mechanism. Code-switching was described by Turina and Altenberg (1991) as an intralingual strategy by which heritage language speakers tend to compensate for linguistic elements that were not accessible or maybe lost in their L1. They also suggested that these strategies are used by both adults and children as L2 learners or
heritage speakers. Further, Lüdi (2003) postulated that most plurilinguals show lexical gaps in their languages (p.178), and they resort to code-switching or, as he described it: "translinguistic wording" in order to fill the gaps with their first language or with their dominant language. Accordingly, Ecke (2004) postulated that such information linguistics elements or lexicons is not forgotten or lost but has low activation levels due to the fact that frequency and recency of use of that language led to a reduction in the accessibility of this information. In other words, language dominance is strongly related to the activation levels by which a language gets stronger and more dominant.

In the present study, there are three different languages L1 Arabic, L2 English, and L3 Norwegian. L1 is the mother tongue of the recruited participants (who are not heritage speakers of Arabic) and L3 is the community language, which means that L1 and L3 are both expected to be very active. We also expect that L1 Arabic would have the highest activation level since the trilinguals from the studied population have built a strong Arabic community and reported to speak Arabic most frequently. Despite the high activation level of L1 and L3, L1 belongs to a different language family, and such context has not been extensively investigated before. This thesis will contribute to filling this gap.

### 2.7.2 The role of typological proximity

According to Blomaert and Meeuwis (1998), code-switching occurs due to the alternation of some linguistic items that stem from two or more fixed, closed languages or grammatical systems that are fully known to the speakers when they perform code-switching. Two studies by Broersma and De Bot (2006) and (2009) can be a clear example of the influence of the typological similarities on code-switching. Broersma \& De Bot studied the relation between cognates and code-switching using two groups of participants. The results showed that the participants who spoke Dutch and Moroccan Arabic produced fewer cognates (4,7\%), whereas the other group of participants who spoke Dutch and English produced more cognates $(71,4 \%)$. They explained that significant difference by indicating the typological similarities between Dutch and English, where both are West Germanic languages and, therefore, a lexically strongly related language pair (Broersma, 2009, P. 448).

It is worth mentioning that there is a difference between typological similarity and typological proximity. The term typological similarity will be used when a typological or formal
universal is equally realized in two typologically close languages. Otherwise, we will talk about typological proximity (De la Fuente \& Liceras, 2015: 333 ). De la Fuente and Liceras used the overt and null subjects in French and Spanish to illustrate this point. They discussed that both French and Spanish belong to the family of Romance languages, which could be classified as typological proximity, but when we take the null subject into account, it is only Spanish, which is classified as a [+Null-subject] language, whereas French is considered as a [-Null subject] language (De la Fuente and Liceras, 2015: 339). Likewise, in this study, English and Norwegian belong to the family of Germanic languages, and they share a lot of linguistic materials. Accordingly, these languages could be defined as typologically proximate. However, when it comes to the verb placement parameter, Norwegian is known as [+V2] language, whereas English is considered a [-V2] language. Therefore, we differentiate between these two aforementioned concepts of typological similarity (structure-related) and typological proximity (wholistic, language-related).

De la Fuente and Liceras (2015) also indicated that typological proximity has an important role in acquiring a second language. Poeste, Müller, and Arnaus Gil (2019) argued that typological proximity is not only applicable to successive languages but also to the simultaneous acquisition of more than two languages (De la Fuente and Liceras, 2015: 465). Therefore, the authors intended to expand this concept and apply it to bilinguals as well as trilinguals and multilinguals from birth. A series of studies by Rothman $(2011,2015)$ investigated typological determinacy and selectivity of L3 syntactic transfer. Rothman argued that bilinguals (L2 learners, simultaneous bilinguals, and heritage bilinguals) have two distinct syntactic systems that could theoretically be transferred to constitute the L3/Ln initial state (Rothman, 2011: 108).

Rothman also criticized the Cumulative Enhancement Model, which predicts that L3 transfer would always be facilitative. He argued that transfer is not always facilitative and what really constitutes the initial hypothesis in multilingualism are the syntactic properties of the closest psycho/typological language, either L1 or L2 (Rothman, 2011: 112). With regard to (psycho)typology in language transfer, Rothman underlines that (psycho)typology plays the most decisive role in transfer selection of one of the available languages to the speaker, provided a certain grouping of languages (Rothman. 2011: 113). However, Poeste, Müller, and Arnaus Gil (2019) pointed out that it is not clear what would happen in a particular
combination of languages where typological proximity is close for all involved languages. In other words, what would happen in a situation "where the L3 is equally typologically similar to the L1 and L2; or the L3 is typologically not at all similar to either the L1 or the L2" (Rothman, 2011: 122). Based on this scenario, Poeste, Müller, and Arnaus Gil (2019) claimed that typological proximity can only be a decisive factor for mixing languages if there is a substantial typological difference between the L1 and the L3 versus L2 and the L3 (Poeste, Müller, and Arnaus Gil, 2019).

In light of the study by Rothman (2011), Poeste, Müller, and Arnaus Gil (2019) came up with different suggestions and hypotheses regarding code-mixing. They claimed that typological proximity may have an important role regarding code-mixing in bilingual children. In addition, they postulated that typological proximity can be an alternative to the influence of language dominance. Moreover, the authors, based on Rothman's observations, hypothesized that children's code-mixing can be influenced by the typological proximity "in terms of the selectivity of the language used within mixed utterances" (Poeste, Müller, and Arnaus Gil, 2019: 464). Their data showed that the relation between code-mixing and language dominance (in bilinguals, trilinguals, and multilinguals) is not tenable. They suggested that typological proximity could be an explanatory factor for children's mixing materials from L1 or L2 in L3 if language dominance fails to explain it.

In this study, L1 belongs to a different language family (Semitic) than L2 and L3 (Germanic languages).In addition, L1 is still the dominant language since it is the participants' mother tongue and the language that was intensively used by participants since birth. The influence of language dominance and typological proximity has not been discussed in such context.

Therefore, in our study we will attempt to determine which factor is more influential on the directionality of the switch between these three languages.

### 2.7.3 Language choice and discourse separation

Many studies have shown that bilingual children are able to separate their languages starting from an early age. In addition, in Genesee \& Nicoladis (2007), it was observed that preschool bilingual children develop and show higher proficiency in one of their languages compared to the other language. We refer to this 'stronger' language as the dominant language (see also Deuchar \& Muntz, 2003). Pearson et al. (1997) defined the dominant language as the
language children receive most input in (in Paradis \& Nicoladis, 2007). In different studies, it was observed that for bilingual children the dominance has an effect on determining the codemixing (intra-sentential CS) patterns and encumbers language choice (see Nicoladis \& Secco, 2000). An example of the role of dominance was observed by Lanvers (2001) (among others). She noticed that young bilingual children produce more code-switched utterances when they speak their less proficient language than when they speak their more proficient language. In Paradis \& Nicoladis (2007), an explanation for the differential rates of code-mixing was proposed. They discussed that children tend to insert inappropriate words into a certain context as a strategy to fill the gaps. Paradis and Nicoladis discussed this phenomenon through an example of a French-English speaking child. They argued that in a conversation where the interlocutor is an English-French speaking person, the French-dominant child is expected to switch to French or insert French words to describe an object he/she does not know in English. Moreover, in a study by Nicoladis and Secco (2000), a Portuguese-English toddler's language choice and vocabulary growth were examined. They found that $90 \%$ of the child's mixed items of the inappropriate language for the context could be attributed to a gap in his lexicon. Based on these findings, we can conclude that unbalanced speakers of a language can rely on choosing items from a more mastered language as a compensatory strategy to fill their gaps in that language.

Furthermore, studies showed that the gap-filling strategy is not restricted to lexical insertion but was also used to compensate a gap in the bilingual's grammar. To increase the communicative capacity, bilingual children tend to code-mix from their weaker to their more dominant language on more complex syntactic structures (content morphemes or phrases) (Bernardini \& Schlyter, 2004). Paradis \& Nicoladis (2007) argue that bilingual children show interlocutor sensitivity within the limits of their linguistic resources (p. 280). They also discuss that the interaction between the dominance and the bilingual child's ability to achieve discourse separation will continue as the children grow older. Paradis and Nicoladis (2007) postulate that when both bilingual's languages reach the threshold of proficiency, the dominance will impose fewer constraints on the child's ability to manipulate language choice in context. This means that children may still have a dominant language, but they will be able to accomplish language separation when they accumulate sufficient resources in their weaker language.

## 3 Methodology

This section will be divided into 4 subsections. Subsection 3.1 provides information about the participants and their background. Subsection 3.2 will present the materials and tools that were used to collect the data for this study. In subsection 3.3, the procedures we followed to conduct this experiment will be explained. Finally, in subsection 3.4 wewill lay out the details pertaining to coding and scoring the results.

The empirical study presented in this thesis was registered and approved by the Norwegian Social Science Data Service (NDS, http://www.nsd.no reference: 653469). Data collection was conducted in accordance with NSD's ethical principles. All participants were above the age 15 , legally able to provide informed consent to participate in the study. The participants received the information about the aims of the study and the details of the narrative study. Oral consent was obtained from all the participants prior to testing. No personal information has been stored or reported. The narratives have been anonymized prior to the analysis.

### 3.1 Participants

For this study, 41 participants were tested in both English and Norwegian. The majority of the participants ( $\mathrm{n}=34$ ) spoke Syrian Arabic as L1, but there were participants who spoke Palestinian Arabic ( $\mathrm{n}=2$ ), Lebanese Arabic ( $\mathrm{n}=3$ ), Algerian Arabic ( $\mathrm{n}=1$ ), Egyptian Arabic ( $\mathrm{n}=1$ ), and Iraqi Arabic ( $\mathrm{n}=1$ ). Furthermore, it was important for this study to look at different age groups. This could help to generalizing to a larger group of participants and thus provide more comprehensive outcomes. The age of the participants at the time of recording ranged from 15;6 to 55 years. The majority of participants ( $50 \%$ ) were in their 20ies. Regarding the participants' gender, female participants outnumbered males with a total number of 26 as opposed to 15 males. Participants' gender was not expected to have any influence on the results of this study.

Among the participants, there was one female participant from Somalia. This participant moved with her family to Syria when she was a little child. The participant grew up in Syria and finished her schooling in the country. According to the participant, her dominant language during her stay in Syria was Arabic. Although her parents are originally from Somalia, the participant reported that she used the community language (Arabic) when speaking with them most of the time.. However, she mentioned that she still uses her Somali
to communicate with her husband and some Somali friends. In addition, there were also two participants from the Kurdish minority in Syria. Both participants were born and grew up in Syria. The participants went to school and had a part of their education there before moving to Norway. The dialect they spoke shows that they came from the north of the country, where a large number of the Kurdish minority is located. During the conversation, these three participants showed an excellent proficiency in Arabic. They spoke as fluent as a native speaker, and no foreign accent or grammatical errors were noticed. Therefore, their participation was accepted.

Table 1: Participants' distribution based on country of origin.

| Country | Syria | Palestine | Lebanon | Algeria | Egypt | Iraq | Somalia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participants | 34 | 2 | 1 | 1 | 1 | 1 | 1 |

Language exposure is one of the factors that could affect the likelihood of code-switching cases. Therefore, information about the learners' language exposure was essential. To collect information related to the exposure, we asked the participants about the age of onset and years of residence in Norway. Based on the questionnaire, the number of the years of residence ranges between 2 years to 12 years at the time of recording. Only 2 participants lived more than 20 years in Norway (participants: 13, 34). These participants moved from Norway to different countries a few years ago. Participant 13, for example, moved to Jordan approximately 2 years ago, and she settled down there after getting married. This participant is surrounded by Arabic- speaking people, including her husband, who does not speak Norwegian at all. Moreover, participant 13 mentioned that at work, the only language they use is English. This means that the participant's exposure to the Norwegian language was interrupted. It was interesting to include these two participants to observe the outcomes they could bring. Regarding the exposure to English, the measurements were based on the years of academic instruction. It has been observed that the age of onset differs from one participant to another depending on the age group. The collected data from the questionnaire revealed that participants who are between 15 and 24, started learning English at the age of 6, whereas the ones who are over 24 started at the age of 10-11. This difference in the age of onset could be explained by the adjustments in the educational system in Syria in 2003-2004. Authorities decided in the school year 2003-2004 that children should learn English at the age of 6
instead of 10 . However, there were also some participants in the older age group who started at the age of 6 (see Appendix C, Participant 3). This participant probably received a private education, which was quite common among rich families at that time.

Table 2: Description of participants.

| Countries | Age group | AoO English | LoE <br> Norwegian | males | females |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | $15 ; 6-55$ | $6-13$ | $2-25$ years | 15 | 26 |

AoO English: Age of Onset English; LoE Norwegian: Length of Exposure to Norwegian
Overall, all participants were multilinguals and exposed to three different languages in their daily life. Therefore, it was important to know how often they are exposed to each of these languages on an ordinary day (see Appendix D). With regard to the info from the questionnaire, 23/41 participants were exposed to Arabic more than to English and Norwegian. In addition, 6 participants were exposed to English more than to Arabic, and 12 participants were exposed to Norwegian more than to Arabic. This means that the exposure's intensity of Arabic comes for most of the participants, Norwegian is the second, and English is the third. A comparison between the exposure to Norwegian and English revealed that 34 participants were exposed to Norwegian more than to English, while there were only 7 participants who were exposed to English more than to Norwegian on a daily basis. The language skills of all participants were assessed in both English and Norwegian. To assess participants' English proficiency, we asked them to take an online level test ${ }^{2}$ issued by the British Council. For the Norwegian language, participants had already taken a national test in the Norwegian language by "Kompetanse Norge." This test is obligatory for all foreign students in order to get a place at a university or a high school in Norway as well as for those who work in the country.

[^1]Table 3: A summary of participants' proficiency in English based on the online test by the British Council.

| Levels | Beginner | Pre- <br> intermediate | Intermediate | Upper- <br> intermediate | Advanced |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Participants | 0 | 6 | 33 | 2 | 0 |

Table 4:A summary of participants' proficiency in Norwegian

| Levels | Beginner | Pre- <br> intermediate | Intermediate | Upper- <br> intermediate | Advanced |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Participants | 0 | 2 | 15 | 22 | 2 |

### 3.2 Materials and Tools:

To elicit relevant speech samples, a semi-naturalistic elicitation task could be useful, for example, a narrative task. LIoyd-Smith (2019) argues that the use of semi-naturalistic speech should be preferred over sentence repetition or read-out tasks because "naturalistic speech is more reflective of participant's speech in real-life situation" (p. 8). In the literature, narrative discourse has been considered a rich source of data that can be used by both linguists and clinicians. The analysis of narratives can help researchers to assess different linguistic features (Gagarina, 2016). One of the goals of this study is to elicit rich spontaneous speech samples. Therefore, we employed two different narrative tasks in order to elicit the data: the MAIN task by Gagarina et al. (2012) and a modified version of the "Picture Descriptive Task" by LIoyd-Smith et al.(2019). The latter task was mainly used to increase the chances of getting more speech samples from the recruited participants.

LIoyd-Smith used a Picture Descriptive Task to elicit data for the study she conducted in both Italian and German. The task included two sets of pictures, 8 pictures in each set. The pictures for the Italian task presented aspects of the countryside's daily life. The task name was "nella fattoria" 'on the farm'. The second set of those 8 pictures were used for the German task. These photos displayed a young couple visiting, for example, a bar, a cinema, a park, and the task was called 'Karl und Susie’ (LIoyd-Smith, 2019, P:8).

Although the Picture Descriptive Task for this study was inspired by the LIoyd-Smith's task, some adjustments regarding the adopted task were made. The employed task consisted of two boards. Each board contained 8 different images, which displayed nouns of tangible things (see Appendix E). The images were not chosen arbitrarily. They were picked up carefully so that the participant would be able to create a story out of these photos. Therefore, it was important to choose a set of nouns, where it is possible for the participants to find a link between them. Each board contained 4 nouns that were cognate in English and Norwegian and 4 non-cognates. The equal number of both cognate and non-cognate nouns was necessary in order to create an equal number of contexts, which could be compared in terms of number with the code-switch responses of participants. In other words, we wanted to see whether the cognate and non-cognate status of the noun would influence the probability of codeswitching. One task was entitled "Picnic in the park", and contained 4 cognates: tree, fish, rain, ball 'tre', 'fisk', 'regn', 'ball' (respectively), and 4 non-cognates: children, mountain, car, dog 'barn', 'fjell', 'bil', 'hund' (respectively). The other task was entitled "Cat and Mouse", and included the following items: glass, cat, mouse, milk, 'glass', 'katt', 'mus', 'melk' (respectively) as cognate nouns, whereas cheese, girl, kitchen water, 'ost', 'jente', 'kjøkken', 'vann' (respectively) were included as non-cognates (the tasks are presented in Appendix E). We expected that the participants could show some selectivity by choosing certain items to create their stories. Therefore, all participants were encouraged to include all the nouns on the board. In addition, all items were randomly distributed on the board in order to avoid targeting only one group of nouns. In other words, we avoided gathering the nouns in two separate groups based on types, as one group for cognates and one for non-cognates. However, creating a story of a set of photos that presented only nouns but no verbs (actions) was quite challenging, and only 15 participants managed to tell a story based on these images. Several participants failed to tell a complete story, while others could not include all items and stopped before finishing. This task, therefore, was considered supplementary.

The MAIN task (Multilingual Assessment Instrument for Narratives, Gagarina, 2012) assesses narrative production of both monolingual and bilingual children. This task can also be used to evaluate children's comprehension of the narratives. The way by which the MAIN task has been designed allows the examiners to evaluate different languages of the same child. In addition, different elicitation modes can be used in this task: Telling, Retelling, and Model story. Examiners/interviewers can choose which model is best for their studies based on the
study's goals and requirements. For this study, the storytelling model was chosen to elicit the narratives.

The MAIN task consists of four different depicted stories: Baby Goats, Baby Birds, Dog, and $C a t^{3}$. Each story contains a sequence of six colorful pictures. To elicit a narrative, participants were introduced to all pictures at once, then to three episodes of two pictures each. The pictures were presented to the participants online as a PDF file instead of using a hard copy version of these pictures. Each file contained two pictures and was given a number that refers to which episode these pictures are for. The participants were asked to initiate a narrative by following a model prompt like, "Now I want you to tell me a story. Look at the picture and tell me what you see". Only two stories were used in this study: Cat and Dog. These two stories were used to elicit narratives in English and Norwegian interchangeably.

A set of various tools was used in addition to the MAIN task and the Picture Descriptive Task. Both tasks required a physical meeting of both participants and interviewer. Unfortunately, due to the outbreak of Covid-19, having physical sessions was quite challenging and often impossible. Therefore, all sessions were conducted online by using different digital platforms. As mentioned earlier, most of the participants were students; that's why Zoom and Teams were used most in addition to Google Meet. These platforms have shown a high level of reliability and proficiency to perform different tasks. Additionally, they provide several functions which were essential for the narrative's elicitation. For example, Zoom, which became very popular worldwide, is provided with a function that allows users to share their screen in order to display materials or to give illustrations. This function, for instance, was utilized to present the pictures to participants. Furthermore, the same application also allows users to record the meeting or the conversation. These platforms can be easily downloaded on both smartphones and personal computers. They are available to everyone, easy to use, and free of charge. Smart phones nowadays are provided with applications that allow recording audios or videos in good quality. I iPhone 6S.Plus to tape

[^2]the narratives. With regard to the statistical analysis we performed, R Studio and a Chi-square calculator ${ }^{4}$ were used. These two programs are available online.

### 3.3 Procedure

As previously mentioned, having physical interviews with the participants was very difficult to manage due to the pandemic (Covid-19). In addition, different regions in the country (Norway here) were under lockdown, and traveling was not recommended. Therefore, both tasks were conducted online. This means that all participants were tested from home, which provided a familiar and safe environment for the test. Moreover, testing online gave the opportunity to assess more participants living in different regions in the country. All sessions started with a small conversation between the interviewer and the participants. During the conversation, an overview of the study and its sub-parts was presented. Next, participants were asked for permission to record the narratives and to share some information they provided. All questions asked by participants about the testing procedures were answered before recording.

Since two elicitation tasks were employed in this study, two different types of procedures were followed:

## MAIN Task:

The procedures started when the participant confirmed that he/she understood the procedure and agreed to the recording of the narratives. Then, the examiner shared his PC' screen and displayed a PDF file that contained the whole story. Next, the examiner asked the participant: "Look at these photos, are you ready?" (لطع بهاول الصور جاهز!). When the participant gave an affirmative answer, the examiner opened file number one, which contained two pictures of the first episode. After that, the interviewer encouraged the participant to start telling the story by saying: "I want you to tell me a story, look at the pictures and tell the best story you can"(


[^3]examiner showed the second episode by clicking on the PDF file number 2, and so on. The same procedures were applied for both stories Dog and Cat.

According to (Gagarina et al. 2012), the participant should start telling the story by him/herself. Therefore, the examiner did not encourage the participant to start the narration by giving hints or an example sentence to show how the story should start. If the participant did not start immediately, the examiner had to wait at least 10 seconds before he interfered. After 10 seconds, the examiner gave prompts such as , "your turn"(دور), "okay"(ماشي), "well" (نمام), "what is happening?" (شنو عمبصير؟). In addition, in some cases, the participant stopped in the middle of the story. Again, in such a situation, the examiner had also to wait for approximately 10 seconds before he interfered. Participants could be encouraged then by saying: "tell me more"( 2 (كبلي /كتر), "anything else?" "(يشيتناني?), "continue" (كم). Nevertheless, the examiner had to be careful about giving prompts to participants. This could influence them and lead to a difference between participants, i.e., experimenter effects (Gagarina, 2012). Importantly, questions like, "who is running?", "what is he doing here?" were not asked by the examiner in order to avoid disturbance or any kind of influence on the participant's narrative.

## Picture Descriptive Task (PDT):

Before recording, the examiner explained the task to the participant. The proficiency level of the participants in English and Norwegian varies from one to another. Therefore, all instructions were given in Arabic to ensure that the instructions were grasped. Next, the examiner asked the participant to address all questions about the task in case there were still some vague issues. When the participant had confirmed that he/she understood the instructions, the examiner shared the screen with the participant. After that, the examiner started the session by clicking on the file that contained the board with the targeted images. Although the instructions were already explained, the examiner repeated the first procedure by saying: "Look at the photos. First, name the photos one by one, and then make the best story out of them." (طلع بالصور, سمي كل صورة لحالها اول شي وبعدين /حكيلي اول قصة مدكن تطلع دعك). Participants had to name the items in the picture to ensure that they were acquainted with these words. The items participants could not name, were registered under the category of "Lack of Vocabulary". Nevertheless, in the MAIN Task, Gagarina et al. (2012) recommended the examiners to wait 10 seconds before giving any prompts to initiate the narration. For this
task, examiner waited from 10 to 20 seconds before giving prompts. The reason behind increasing the length of the waiting time is that this task is more challenging and requires more cognitive effort. Participants needed a moment to think of a possible set of actions, where all pictures can be included. However, prompts, in general, were given carefully both at the beginning and in the middle of the narration. Again, prompts such as, "okay" (ماشي), "well" (تمام), "your turn" (دورك), were given only when the participant took more than 20 seconds to start the narrations. In addition, prompts like, "continue" (كّ), "anything else?" (اي شي تاني؟), "tell me more" (حكلي اكتر), were used when the participant seemed to stop or stayed silent in the middle of the narration.

As mentioned earlier, two tasks were employed, and each task consisted of two stories. Therefore, the examiner needed to interview each participant several times. Since the Picture Descriptive Task (PDT henceforth) showed a certain amount of complexity, many participants failed to complete this task. Thus, the number of the interviews depended on the number of the stories/tasks the recruited participant managed to tell. Accordingly, participants, who only managed to tell stories from the MAIN task (two stories), needed two sessions, whereas those who managed to complete both tasks ( 4 stories) used 4 sessions, (i.e., one session for each narration). Participants, in the first session of the MAIN task, told one story and answered the questionnaire. However, some participants preferred to complete the questionnaire when they told the last story. In the second session, they only had to tell the second remaining story. Additionally, the language by which the narration would be told was the participant's choice. This means that if the participant chose to tell the first story in English, the second story in the second session would be in Norwegian. To give the participants a sense of control, we let them choose the language of the first narrative.

Regarding participants who completed both tasks, 4 interviews were used in order to elicit the narrations, one session for each story. However, some participants were confused and embarrassed about making mistakes. Therefore, to make them feel comfortable and confident, it was important to start with the task that showed less complexity. Thus, the first story in the first session was often chosen from the MAIN task. Accordingly, the distribution of the tasks in these 4 sessions was as follows: session 1- MAIN, session 2-PDT, session 3-MAIN, session 4- PDT.

In practice, among those who managed both MAIN and PDT tasks (14 participants), nine participants accomplished the tasks in 3 sessions. The same procedures were followed in the first and the second session (i.e., one story to tell in each). However, in the third session, these nine participants were intentionally asked to tell two stories with short intervals between them., These stories had to be told in two different languages, one in English and one in Norwegian. Regarding the length of each session, it depended on the task and the number of narratives the participant did. Accordingly, the length of the session varied from 15 to 20 minutes.

The proficiency level and language mastering are issues that should be considered when it comes to code-switching. To assess the proficiency in L2 and L3, all participants were asked to take a proficiency test, by which we could measure the proficiency in that language. In order to measure the level of the participants in English, they were asked to do an online test. This test was issued by the British Council, and it is available to all users with no charge. The test consists of 25 questions, where the participants' knowledge of grammar and vocabulary is assessed. It is a multiple-choice test, where only one answer is correct. When the participants answer a question, a self-rate question follows. The self-rate question asks about how certain the participant was about his/her answer. The test is not formal and is designed to approximate the proficiency level of the participants by giving a percentage of their correct answers. The result of the test is also available in categorical form like; beginner, beginner to pre-intermediate, pre-intermediate, intermediate, intermediate to upper-intermediate, upperintermediate, and advanced. Since the test by British Council only assesses the participant's knowledge of grammar and vocabulary, another method was required in order to assess their oral production. To assess oral proficiency, the participants were asked to provide a selfevaluation. They had to assess their own skills in listening, reading, and speaking by using words like; beginner, pre-intermediate intermediate, upper-intermediate, and advanced. Selfevaluation, along with the participants' narratives were considered in order to assess the overall speaking skills of the recruited participants. Similarly, the same procedures were applied to assess the participants' skills in Norwegian. However, the self-evaluation process was much easier for the participants because many of them were students (approx.80\%). Universities and high schools in Norway demand from foreign applicants a certain level of proficiency in the Norwegian language as an admission requirement. Consequently, all participants who are studying at universities or high schools have already passed the
proficiency test. This means that their level in the Norwegian language ranges from B1 to B2 ${ }^{5}$ according to CEFR (the Common European Framework of Reference for Languages). Most of the participants took the Norwegian national test, which is conducted by "Norskkompetanse." This test assesses the candidate's skills in both listening, reading, speaking, and writing. Participants were not asked to assess their writing skills. Since this study focuses on Code-Switching in oral production, writing skills assessment was not essential. The remaining $20 \%$ of the participants are the ones who have already finished their studies or those who are still attending Norwegian courses.

The online English proficiency test was sent and returned to the examiner via MMS or SMS using WhatsApp and Facebook Messenger. Participants received a link to the test from the examiner. In addition, an instruction about using the test was sent along with the link. When the participants accomplished the test, they had to take a screenshot of the result and send it back to the examiner. Participants were instructed to send the first result they got and not to repeat the test for a better result.

It is important to mention that all personal information, including the audio recordings, information about age, country of residency, and other info provided by participants in the questionnaire, will be deleted from the author's phone and computer upon the defense of the Thesis.

### 3.4 Coding and Scoring

All narratives produced by the recruited participants were recorded via a smartphone. The author, who is a native speaker of Syrian Arabic, orthographically transcribed all narratives in English. The Norwegian recordings were transcribed with the help of two native speakers of Norwegian after we anonymized the participants (see Appendix F). Since this study is investigating certain structures which differ from the structures LIyond-Smith (2019) and Gagarina et al. (2012) have investigated, the scoring procedures by the aforementioned scholars could not be followed. Therefore, a new scoring procedure and a scoring sheet were created specifically for this study (see Appendix B). First, responses produced by the

[^4]participants were counted, but before counting, some preliminary work was necessary. We mentioned earlier that in the modified task, we chose an equal number of cognate and noncognate items to create an equal number of contexts for these two types of nouns. This was difficult to achieve in the MAIN task. The number of cognates and non-cognates items in the stories was not equal. The Cat story, for example, included approximately 8 cognate items as opposed to 12 non-cognates. To solve this issue, we tried to have an equal number of narratives of each story. The total number of stories told by participants was 40 stories in English and 40 stories in Norwegian. This means that we got 20 English stories of a Cat and 20 English stories of a Dog, 20 Norwegian stories of a Cat, and 20 Norwegian stories of a Dog. However, many participants code-switched items outside of the actual stories. Therefore, it was challenging to have control over the number of code-switched instances.

All fillers and stops (e.g., Uhm, uh, eh..etc.) in the narratives were included but not counted. In addition, all questions and conversations that were not related to the narrative were also excluded from the counts. Code-switched instances that occurred several times in the same narrative were counted once. Uncompleted responses were counted as well. In addition, short forms such as it's, he's, there's, and compound words in Norwegian narratives (for example, barnehage "kindergarten," lekeplass "playground") were counted as one response.

Furthermore, in some narratives, there were few utterances that were difficult to understand by both the author and the native speakers of Norwegian. These utterances were coded as "AMBIGUOUS" (AMB as an abbreviation) and marked as unscorable. Moreover, the participants produced some responses which were understood but wrongly used. In other words, the usage of these responses was improper in certain contexts. Therefore, these responses were marked with a question mark following that response and were counted. For the code-switched responses in Arabic, a translation was provided. The translation of every response stood right after it in italics in quotation marks.

The total number of responses in each narrative was counted after excluding the irrelevant conversations and speech samples that ignored the targeted story. A Microsoft Word sheet was used to count the responses produced by participants. Next, all code-switch instances in every narrative were singled out and counted. The total number of code-switch responses from all narratives was counted and classified under categories based on: the Direction of the switch, the Type of Code-switch Responses, and Motivation of the Switch.

The first category included responses according to the language of the switch. This study investigates three different languages. This means that when the participant did the narration using one language, there were two possible languages, where the linguistic material could be borrowed from. For example, if the target language was English, the participants could possibly produce items from Norwegian and Arabic. Consequently, the code-switch responses in the English narrative would be into Norwegian and Arabic. Responses from both languages were counted all at once. Next, the scored code-switch responses in English narratives were counted separately based on the language of the switch. The reason for the separation is to know exactly how many responses came from Norwegian and how many from Arabic. A similar scoring procedure was followed in the Norwegian narratives. First, all code-switch responses in the Norwegian narratives were counted, and next, they were separated into two groups based on the language of the switch; one group included responses in English, and the second group included responses in Arabic.

The next category recorded morphological and morphosyntactic code-switch instances such as definite articles in the Norwegian language (-en, eet) in addition to cognate and noncognate instances (e.g., cat/katt, beach/strand, respectively). The total number of morphological instances was counted in each narrative. As mentioned earlier, when the participant tells a story in one language, there are two possible languages from which the scored instances could be borrowed. Accordingly, the scored morphological instances were classified into two groups based on the language of the switch. This means that if the language of the narrative was English, the scored instances would be counted as a combination of Norwegian and Arabic responses. The reason for separating the total instances into two groups based on the language of the switch was to determine the language from which the participants code-switch the highest number of instances. Furthermore, instances that shared a common etymological origin (i.e., cognate responses) were singled out of the total number of code-switch responses and counted. In order to make the results comparable, in terms of numbers, all non-cognate code-switch responses were also counted. Again, the total number of the cognates and the non-cognate items were sorted out based on the language of the switch. This means that the total number of the scored instances in each group (i.e., cognate and non-cognate) was a combination of instances from two languages. The reason for
separating the total instances into two groups based on the language of the switch was to determine the language into which the participants code-switch the highest number of instances.

In addition, among the lexical cognates, there was a group of instances such as ball 'ball,' cat 'katt,' glass 'glass', and others that were considered problematic. These speech samples showed phonological and spelling similarities. Therefore, it was difficult to determine whether they were code-switched into English from Norwegian or not. Similarly, it was also difficult to determine whether such responses were code-switched from English into Norwegian or not. In order to score such codes and solve this problem, the correct pronunciation was taken into account. This means that a lexical cognate, for example, 'ball', was scored as an English utterance when the participant pronounced it using a long open-mid back rounded vowel /bs:l/. But, when the participant pronounced the word 'ball' using a short open back unrounded vowel/bal/, this lexicon was coded as Norwegian.

The last category (Motivation of the switch) recorded code-switch instances due to the lack of vocabulary and triggering. Some participants showed a gap in their lexical knowledge during the narration. They stopped the narration, trying to remember the words for the different items presented in the stories. In addition, some participants tended to ask the interviewer directly about the meaning of some items. Accordingly, all responses produced in such cases were included and counted. Furthermore, instances that formed the code-switched phrases due to triggering (multiple word code-switching) were first counted word by word and added to the total number of the code-switch responses in that narrative. After that, all phrases (sequence of several triggered words) that were switched due to triggering were counted phrase by phrase.

Results related to the exposure's intensity were coded by asking the participants the following question: What language do you use with family, work, friends, studies, social media, leisure time? The answer to this question could be two languages and sometimes three when it comes to friends and social media environment. In this case, the participant had to give an approximate percentage of the usage of each language. For example, Social media: Arabic $40 \%$, Norwegian $40 \%$, English $20 \%$. When the participant was done estimating his/her exposure to each of these languages in these 6 possible environments, the percentages of each
language were summed up. The sum was divided by 6 ( 6 categories) in order to get an average of the daily exposure of each language (see Appendix A). However, it is important to indicate that all these facts about the exposure remain quite subjective.

As we have mentioned earlier, one of the aims of this study was to investigate whether there will be more instances of code-switching among cognates than non-cognates. Therefore, a statistical analysis was needed to measure how significant the relationship between the cognate status (cognate vs. non-cognate) and the switch status (code-switch vs. non-switch). First, we needed to count the total number of cognates and non-cognates and code-switched and not code-switched responses separately for the two narrative languages, as well as to count the instances where the statuses overlapped, e.g., code-switched cognate and nonswitch cognates, etc. To do that, we ran a frequency test (Rstudio was used) to see how frequent each response was used. A Chi-square calculator was used to estimate the significance of the relationship between the cognates and the switch status.

## 4 Results

This section will present the data we have compiled from the participants for this study. In the previous section, we have indicated that each participant had to tell two different stories, sometimes four, and in two different languages. This means that we have two sets of results, the first one comes from the produced English narratives, and the other one comes from the Norwegian narratives. In addition, a model we used is manifold and includes several variables. Based on this, we presumed that to present the results from the Norwegian and English narratives simultaneously might create confusion. Therefore, the results of all these narratives are presented separately based on the language of the narrative, and then, a comparison between the results of the English and the Norwegian narratives is provided.

## 1-English Narratives (EngNs):

A total number of $36 / 41$ participants produced code-switch responses in their English narratives. This means that 5 participants did not produce any code-switching responses. A closer look at the data reveals that there were 27/36 participants who produced codeswitching responses only from Norwegian. Among these 36, there were also some participants who produced responses from both Norwegian as well as from Arabic. Thus, the
total number of participants who produced code-switching responses from both languages was $8 / 36$. Besides, it was noticed that only $1 / 36$ participants produced code-switching responses only from Arabic into the EngNs. (See table. 5, and Figure. 1 for a detailed overview of the results).

Table 5 The distribution of participants based on the language of switch.

|  | CSRs in <br> EngNs | CSR from <br> Nor \& Ar | CSR only <br> Nor | CSR only Ar | No scored CSRs |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Participants | $36 / 41$ | $8 / 36$ | $27 / 36$ | $1 / 36$ | $5 / 41$ |
|  | $(87,80 \%)$ | $(22,22 \%)$ | $(75 \%)$ | $(2,77 \%)$ | $(12,19 \%)$ |

CSR into ENgNs stands for code-switch responses into EngNs; CSR from Nor\&Ar stands for code-switch responses from Norwegian and Arabic; CSR only Nor stands for code-switch responses only from Norwegian, CSR only AR stands for code-switch responses only from Ar; no CSR at all stands for no code-switch responses at all.

Figure 1 Distribution of all participants based on the language of the switch.


For further detailed results, we decided to quantitively assess the code-switch responses and divide them into two groups according to the language of the switch. The results reveal that in all English narratives produced by the participants, there was a total number of (222) code-
switching responses (CSRs, henceforth) from both Norwegian (Nor) and Arabic (Ar). In the participants' narratives, we recorded 213 CSRs $(95,16 \%)$ in total from Norwegian, as opposed to only 9 CSRs (40,05\%) from Arabic into English (see example (3 a-b) bellow).

3-a) ..holding balloon and bag wearing shibshib "slipper"... [see appendix, participant (20)]
-b) ....The small tree. Shou "what" also we can see... [see appendix, Participant (21)]

Table 6: Quantitative assessment of CSRs based on the language of Switch.

| Total CSRs | CSRS from Nor | CSRs from AR |
| :---: | :--- | :---: |
| In EngNs |  |  |
| $\mathbf{2 2 2}$ | $213 / 222(95,16 \%)$ | $9 / 222(4,05 \%)$ |

With regard to the type of the CSRs, we divided all responses that were borrowed from Nor and AR into two major types; Cognates and non-Cognates (see (4a-b); (5 a-b)). The data reveals that cognate responses (CogRs) outnumber non-cognate responses (NonCogRs), where126 responses were classified as cognate against 87 as non-cognate CSRs. The total number of cognate CSRs constitutes $56.75 \%$ of the total amount of CSRs from both Norwegian and Arabic (126/222) and 59.15\% of the purely Norwegian CSRs (126/213). Regarding cognate CSRs from Arabic, we did not record any responses from this group (0/126). Moreover, the result revealed that the total amount of the non-cognate CSRs (NonCog.Rs) constitutes $39.18 \%$ of the total number of the CSRs in the EngNs (87/222). We also observed that Norwegian non-cognate CSRs outnumber their Arabic peers, where 78 responses were scored from Norwegian as opposed to 9 non-cognate CSRs from Arabic. Thus, the total number of Norwegian non-cognate CSRs (Nor.NoCog.Rs) constitutes 35.13\% of the total number of CSRs in EngNs (78/222). In addition, this number makes up a proportion of $36.61 \%$ of the purely Norwegian CSRs (78/213) and $89.65 \%$ of the total amount of the NonCog.Rs (78/87). On the other hand, the total amount of Ar.NonCog.Rs constitutes only $4.05 \%$ of the total number of CSRs in EngNs (9/222). In addition, this number also constitutes $100 \%$ of the purely Ar.CSRs (9/9), and $10.34 \%$ of the total amount of the NonCog.CSRs (9/87). (see table 7)

4-a) ....the cat finish it også "also" to eat .... (cognate)
-b) ....eat fish and the boy provd "try" eh..prov... (non-cognate)

5-a) I can se "see" the dog he watch the ba... (cognate)
[see appendix F, Par (1)]
-b) he is leik "play" with the mouse, and the mouse.... (non-cognate)

Table 7 Distribution of the Arabic CSRs according to type of responses Cognate "Cog" and NonCognate.

| ArRs | Out of T.CSRs <br> (222) | Out of T.Ar- <br> CSRs / (9) | Out of T.CogRs | Out of <br> T.NonCogRs |
| :---: | :---: | :---: | :---: | :---: |
| Non-Cognates | $9(4,05 \%)$ | $9(100 \%)$ | - | $9(10,97 \%)$ |
|  |  |  |  |  |

"NonCog"; Out of Total CSRs "T.CSRs", Out of Total Arabic CSRs "T.Ar-CSR", out of Total Cognate Responses "T.CogRs", out of Total NonCognate Responses "T.NonCogRs

Figure 2 Distribution of the Norwegian CSRs according to type of responses Cognate "Cog" and NonCognate "NonCog".


Out of Total CSRs "T.CSRs", Out of Total Norwegian CSRs "T.N.CSR", out of Total Cognate Responses "T.CogRs", out of Total NonCognate Responses "T.NonCogRs".

Furthermore, with regard to the distribution of these two types of CSRs, Cog, and NonCog, among the participants of this study, the data reveals that the majority of the participants produced both Cognate and Non-Cognate instances by a total of 23 out of 41 participants. On the other hand, only 5 participants did not score any type of CSRs from either languages, Nor and Ar. Moreover, the total number of participants who only produced Cognate CSRs in the EngNs were 9 / 41 participants, whereas only 4 out of 41 participants produced Only Noncognate CSRs. The result, regarding the distribution of the participants, is displayed in the table: (8)

Table 8 Distribution of participants based on their production of the type of CSRs in EngNs.

| Type of CSRs | Cognate | Non-cognate | Cog \& Non- <br> Cog | No CSRs were <br> scored |
| :---: | :---: | :---: | :---: | :---: |
| Participant | $21,95 \%$ | $9,75 \%$ | $56,09 \%$ | $12,19 \%$ |

Importantly, some instances that were switched were scored due to the lack of vocabulary. The total number of the responses in this category is 21 , which constitutes $9.45 \%$ of the T.CSRs from both Nor and Ar. Again, the CSRs from Nor in this group outnumber the CSRs from $A r$. The total number of the CSRs from Nor is $17 / 222$ with a proportion of $7.65 \%$ of the T.CSRs, $(7,98 \%)$ out of the T.N.CSRs into EngNs (17/213), and a proportion of (80,95\%) out of the total CSRs due lack of vocabularies (T.CSR.LV)(17/21). With regard to the results, the total number of responses from Arabic in this group constitutes 19.04\% (4/21) of the T.CSRs.LV, $44.44 \%$ ( $4 / 9$ ) of the T.Ar.CSRs, and $1.80 \%$ ( $4 / 222$ ) of the total number of the CSRs into EngNs.

Table 9 Rate of CSRs.LV based on their occurrence in the language of the switch.

|  | Norwegian | Arabic |
| :---: | :---: | :---: |
| Total number | 17 | 4 |
| Out of T.CSRs | $17 / 222(7,65 \%)$ | $4 / 222(1,80 \%)$ |
| Out of T.N.CSRs | $17 / 213(7,98 \%)$ | - |
| Out of T.Ar.CSRs | - | $4 / 9(44,44 \%)$ |
| Out of T.CSRs.LV | $17 / 21(80,95 \%)$ | $4 / 21(19,04 \%)$ |

In addition to the CSRs that occurred due to the lack of vocabulary, we coded a certain number of Morphological and Morphosyntactic CSRs (MorCSRs) (cf. 6 a-b). We also noticed some instances of multiple CS (M.CSRs) (cf. 7 (a-b)). At the same time, all responses that were scored as belonging to the previously mentioned groups (Mor.CSRs and M.CSRs, respectively) came from Norwegian. No instances were recorded from Arabic in either of the groups 0 / 9 ( $0 \%$ responses). According to the results, participants scored in total 5 Mor.CSRs, which constitute $2,25 \%$ of the T.CSRs (5/222), and $2.34 \%$ out of the T.N.CSRs (5/213). Moreover, the total number of M.CSRs is 19 , which constitutes a proportion of 8.55\% of the Total CSRs (222) in the EngNs, and 8.92\% of the T.N.CSRs (19/213).

6-a) ...the dog try to eh..to hunter $\ldots$
"....the dog tries to hunt..."
-b) ...the boy provd eh prov eh å catch $\underline{e}$ eh the ball with fishing... [see Appendix F, Par (30)]
"...the boy try to catch the ball with fishing .."
7-a) ...the dog ... fortsetter etter the ball...
"...the dog ...continue after the ball.."
-b) ... the kids trying take the ball og gi den til dogen.
"...the kids trying take the ball and give it to the dog.."

We should indicate that the frequency test revealed that there are in total $27,98 \%$ (3293/11769) cognates and $71,95 \%$ (8468/11769) non-cognates in all EngNs. In addition, a Chi-square test of independence was performed to examine the relationship between the cognate status of the word and the likelihood of code-switching. The relation between these variables was significant; the Chi-square test statistic $\left(X^{2}\right)$ is 117.4056 , the P -value is $<.00001$. There were significantly more instances of code-switching among cognates than among noncognates in the EngNs.

## 2-Norwegian Narratives (NorNs):

Our data revealed that the total number of CSRs from both English and Arabic into the Norwegian narratives was 86 instances. The data also showed a remarkable difference between the total number of responses borrowed from English vs. Arabic. We recorded 81/86 English CSRs, which constitute a proportion of $94.18 \%$ of the total CSRs in the NorNs (cf. 8 a-b), whereas the number of registered CSRs from Arabic is only $5 / 86$ instances, which constitute a proportion of $5.81 \%$ of the total number of CSRs in the NorNs. (cf. 9 a-b). Moreover, 27 / 41 participants produced CSRs in NorNs. On the other hand, 14 / 41 participants did not score any CSRs, neither borrowing from Arabic nor from English. Nevertheless, we observed different types of participants based on the language they borrow from. Therefore, we decided to divide the participants into three groups based on the language(s) of the switch. The first group is the largest one and includes 24 / 27 participants, who produced only English CS responses in their NorNs. The second group was supposed to include participants who produced CSRs only from Arabic, but in fact, we did not observe such participants. 3 / 41 participants in the third group produced CSRs borrowing from both Ar and Eng. Consequently, we can conclude that only 3 participants included CS instances from Arabic in their NorNs.

8-a) ...mus run og eh.. Hand bak mus.....
[see Appendix F, Par. (4)]
"...mous run and eh..dog back mouse..."
-b) ...han har under ha..under arm ball.....
[see Appendix F, Par. (1)]
... he has under ha...under arm ball...

9-a)... denne mus skal kanskje gå inn i darkhoushe "hole"
... this mouse will maybe go in hole..
-b) ...Tredje bilde denne hund khabat "crashed" inn tre.
"Third picture this dog crashed into tree"

Table 10 Quantitative assessment of CSRs in NorNs based on the language of the switch.

| Total CSRs | CSRS from Eng | CSRs from AR |
| :---: | :---: | :---: |
| In NorNs |  |  |
| $\mathbf{8 6}$ | $81 / 86(94,18 \%)$ | $5 / 86(5,81 \%)$ |

Table 11 The distribution of participants based on the language of the switch.

|  | Total CSRs <br> in NorNs | CSR from <br> Eng \& Ar | CSR only <br> Eng | CSR only Ar | No scored CSRs |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Participants | $27 / 41$ | $3 / 27$ | $24 / 27$ | $0 / 27$ | $14 / 41$ |

Total CSR in NorNs for total N of participants who code-switched in NorNs; CSR from Eng\&Ar stands for code-switch responses borrowed from English and Arabic; CSR only Eng stands for code-switch responses borrowed only from English; CSR only Ar stands for code-switch responses borrowed only from Ar, no CSR at all for no code-switch responses at all.

Next, the CSRs in the Norwegian conditions were grouped into two major types: Cognate and Non-Cognate. The data revealed that the NonCog.Rs in NorNs slightly outnumbered the CogRs. We recorded 49 NonCog.Rs as opposed to 37 CogRs. The total number of the NonCogRs constituted a proportion of $56.97 \%$ of the total amount of the CSRs ( 49 / 86), whereas the overall number of the CogRs constituted $43.02 \%$ of the total number of the CSRs in the NorNs. In addition, the data showed that the English NonCogRs outnumber their counterparts from Arabic. The participants produced 44 NonCogRs borrowed from English, whereas only 5 such CS responses were registered for borrowing from Arabic. Thus, the total
number of the Eng.Non.Cog.Rs constituted $51.16 \%$ of the total amount of the CSRs (44 / 86). This corresponds to the proportion of $54,32 \%$ of the purely English CSRs (T.Eng.CSRs) (44 / $81)$ and $89,79 \%$ of the total amount of the Non.Cog.Rs in the NorNs (44/49). Moreover, the total number of Arabic Non.Cog.Rs constitutes a proportion of $5.81 \%$ of the total number of the CSRs (5/86) and $100 \%$ out of the total Arabic non-cognate responses (T.Ar.Non.Cog.Rs)(5/5), in addition to $10.20 \%$ of the total non-cognate responses (T.Non.Cog.Rs) (5/49): see figure 3, table 12. Regarding the Cog.Rs in NorNs, we registered that $43,02 \%$ of the overall CS responses were cognates $(\mathrm{CogRs})(37 / 86)$. This number corresponds to $45.67 \%$ of the total number of purely English CSRs (T.En.CSRs) in the NorNs (37/81). However, the data reveals that no cognates were borrowed from Ar in the NorNs, and therefore, results for this category were marked as zero.

Table 12 Distribution of the Arabic CSRs according to the type of the responses (Non-Cognate "NonCog").

| ArRs Out of T.CSRs <br> $(86)$ Out of T.Ar- <br> CSRs / (5) Out of T.CogRs Out of <br> T.NonCogRs <br> Non-Cognates $5(5,81 \%)$ $5(100 \%)$ - $5(10,20 \%)$ <br>      |
| :--- |

Figure 3 Distribution of the Norwegian CSRs according to the type of the responses Cognate "Cog" and Non-Cognate "NonCog" in NorNs


Finally, we observed that the production of cognate and non-cognate CSRs varied from one participant to another. What we mean here is that some participants produced only cognate CSRs, while other participants produced both types or only non-cognates. To provide a clear overview of the occurrence of these two types among participants, we distributed them into different groups based on the type of CSRs they produced. The results of this distribution reveal that 4 / 41 participants produced only CogRs, whereas the total number of participants who produced only NonCogRs was 11 / 41. Furthermore, $12 / 41$ participants produced both CogRs and NonCogRs. On the other hand, there were 14 participants who did not score any type of CSRs in their NorNs.

Table 13Distribution of the participants based on their production of the type of CSRs in NorNs.

| Type of CSRs | Cognate | Non-cognate | Cog \& Non- <br> $\operatorname{Cog}$ | No CSRs at all |
| :---: | :---: | :---: | :---: | :---: |
| Participants (41) | 4 | 11 | 12 | 14 |
|  | $(9,75 \%)$ | $(26,82 \%)$ | $(29,26 \%)$ | $(34,14 \%)$ |

Furthermore, it has been registered that in the Norwegian conditions, there were some instances that were classified under CSRs due to the lack of vocabularies (CSR.LV). The total number of these responses in all narratives was 22 ( $25,58 \%$ out of the T.CSRs in NorNs). The majority of the CSRs in this group are borrowed from the English language, where the participants scored 20 instances, which make $23.25 \%$ out of the T.CSRs (20/86). On the other hand, only 2 instances from Arabic were registered, which constitute a proportion of $2.32 \%$ out of the T.CSRs. Moreover, these 20 instances from English constitute a proportion of $24.69 \%$ out of the T.EngCSRs, and $90.90 \%$ out of the total CSRs.LV, whereas the CSRs from Arabic make a proportion of $40 \%$ out of the T.Ar.CSRs, $(2 / 5)$, and $(9,09 \%)$ out of the total number of CSRs.LV. (cf. 10 and 9 a-b above). For further understanding, see table 14 below.

10-a) ... denne gutt kanskje som surprised, også han mistet... [see Appendix F, Par. (12)]
"..this boy as if surprised, also he missed..."
Before we start to describe the results for our last category, we would like to indicate that no instances related to the morphological and morphosyntactic code-switching were scored. Therefore, the results from this category were marked as zero. Nevertheless, back to our last category, in which multiple-word CSRs were scored, the results reveal that the total instances in this category were 12 ( $13,95 \%$ out of the T.CSRs), which also constitute a proportion of $14.81 \%$ out of the T.EngCSRs (12/86), and a proportion of $100 \%$ out of the total number of the CSRs due to triggering (12/12). This means that no instances in this category were scored from Arabic, and all responses in this category stem only from English (cf. 11 a-b).

11-a) ...Kanskje en femten / seksten year ol..
[see Appendix F, Par. (13)]
"...maybe a fifteen / sixteen year ol..."
-b) .. Har på seg en ..eh $t$-shirt and..eh også..
"...wearing $a$...eh..t-shirt and ..eh also.."

Table 14 Rate of CSRs.LV based on their occurrence in the language of the switch.

| Language | English | Arabic |
| :---: | :---: | :---: |
| Total number | 20 | 2 |
| Out of T.CSRs | $20 / 86(23,25 \%)$ | $2 / 86(2,32 \%)$ |
| Out of T.Eng.CSRs | $20 / 81(24,69 \%)$ | - |
| Out of T.Ar.CSRs | - | $2 / 5(40 \%)$ |
| Out of T.CSRs.LV | $20 / 22(90,90 \%)$ | $2 / 22(9,09 \%)$ |

Moreover, the frequency test shows that there are in total $43,72 \%$ (5020/11481) cognates as opposed to $56,27 \%$ ( $6461 / 11481$ ) non-cognates in all NorNs. The Chi-square test revealed that the relation between the cognate status of the words and the likelihood of code-switching was not significant; the Chi-square test statistic $\left(X^{2}\right)$ is 0,1267 , the $P$-value is $<.721923$.there were not significantly more instances of code-switching among cognates than among noncognates.

## 3- EngNs vs. NorNs:

Above, we described the results for EngNs and NorNs separately. These results show a considerable amount of details about different categories. Therefore, we would like to juxtapose the results of both English and Norwegian narratives in order to provide a comprehensive overview of these results.

Table 15:The occurrence of the CSRs in EngNs \& NorNs

| Narratives | EngNs | NorNs |
| :---: | :---: | :---: |
| Total CSRs | 222 | 86 |
| CSRs from Eng | - | 81 |
| CSRs from Nor | 213 | - |
| CSRs Ar | 9 | 5 |

Table 15 shows the total number of CSRs in both EngNs and NorNs. The contrast between the number of CSRs in these two languages is clear. |Participants produced 222 CSRs in the EngNs as opposed to only 86 CSRs in the NorNs. Furthermore, in both EngNs and NorNs, the CSRs borrowed from Arabic are limited compared to the recorded CSRs borrowed from other languages, namely Norwegian and English. Nevertheless, the total amount of the Arabic CSRs in the EngNs (9 responses) is slightly higher than the total number of the CSRs in the NorNs (5 responses). In addition, in EngNs the CSRs (213) from Norwegian as a baselanguage of the switch, outnumber the CSRs (81) from English as a base-language in the NorNs. This noticeable difference could have some important indications. With regard to the participants, figure (4) and table (16) illustrate the distribution of the participants based on their production of CSRs, and the language of the switch in both EngNs and NorNs is provided.

Table 16:quantitative assessment of the participants based on their production of CSRs

|  | T.Par | No scored CSRs |
| :---: | :---: | :---: |
| EngNs | $36 / 41$ | $5 / 41$ |
| NorNs | $27 / 41$ | $14 / 41$ |

English narratives (EngNs); Norwegian narratives (NorNs); Total number of participants (T.Par)

Figure 4: Distribution of participants according to the language of switch in NorNs \& EngNs


Table 16 shows how many participants in this study produced CSRs in both EngNs and NorNs. As the table illustrates, 36 participants produced CSRs in the EngNs, whereas 27 participants produced CSRs in NorNs. In addition, the table also shows that some participants did not produce any CSRs in either EngNs or NorNs. The total number of the participants who did not produce any CSRs in EngNs was 5 as opposed to 14 participants in NorNs. Moreover, figure 4 clarifies the distribution of the participants according to the language of the switch. It shows that a total of 27 participants in EngNs scored only Nor.CSRs, whereas 24 participants in NorNs produced code-switch instances borrowed from English only. Additionally, some participants produced CSRs borrowed from two languages in their narratives. As the figure illustrates, 8 participants in EngNs produced code-switch instances borrowed from both AR and Nor, whereas only 3 participants in NorNs produced instances borrowed from Eng and Ar. Finally, only 1 participant produced CS instances from Arabic only in the EngNs, but no participant produced any Arabic only code-switch instances in their NorNs.

Furthermore, a comparison between the results obtained in the EngNs and the NorNs reveals that participants generally produced both cognate and non-cognate CSRs. Regarding cognate CSRs, the proportion of the instances in English narratives is higher than the proportion of their counterparts in NorNs. Of the total number of CSRs, $56.75 \%$ of CogRs were scored in

EngNs as opposed to $43.02 \%$ of cognate instances in the Norwegian narratives. Unlike the group of cognate instances, the proportion of non-cognate instances in the NorNs was slightly higher than the proportion of their counterparts in EngNs. In EngNs, we recorded a proportion of $39.15 \%$ of non-cognate CSRs, whereas $56.97 \%$ of NonCog.Rs were recorded in NorNs (illustrated in table 17 below).

Table 17:provide a comparison between the occurrence of CogRs and NonCog.Rs in EngNs and NorNs.

| Narrative | Cognate responses <br> (CogRs) | Non-cognate responses <br> (NonCog.Rs) |
| :---: | :---: | :---: |
| English narratives |  |  |
| (EngNs) | $56.75 \%$ | $39.15 \%$ |
| Norwegian narratives |  |  |
| (NorNs) | $43.02 \%$ | $56.94 \%$ |

With regard to the distribution of Cognate and Non-cognate CSRs based on the language of the switch, we observed that no cognate CSRs were scored from Arabic. This means that all CogRs in EngNs were from Norwegian, and all CSRs in NorNs were from English. Accordingly, the proportion of Nor.Cog.Rs and Eng.Cog.Rs is $100 \%$ for each of the total number of CogRs in both EngNs and NorNs. On the other hand, non-cognate CSRs in both EngNs and NorNs consist of instances from two languages. Of the total number of noncognate instances in EngNs, we scored $89.65 \%$ of the purely Norwegian non-cognate responses, whereas $10.34 \%$ of the non-cognate responses were scored from Arabic. On the other hand, of the total number of non-cognate instances in NorNs, $89.79 \%$ of the purely English non-cognate responses were scored as opposed to $5.81 \%$ of the CSRs from Arabic (see figures 5 and 6).

Figure 5: The distribution of the CogRs based on the language of switch in EngNs and NorNs.


Figure 6:The distribution of the NonCog.Rs based on the language of switch in EngNs and NorNs


In both Norwegian and English narratives, participants scored CSRs due to the lack of vocabularies (CSRs.LV). In EngNs, we recorded $9.45 \%$ of CSRs.LV of the total number of the CSRs, whereas, in NorNs, the proportion of CSRs.LV was $25.58 \%$. The proportion of CSRs.LV in English narratives includes instances from both Nor and Ar. Therefore, of the
total number of CSRs.LV in EngNs, we recorded 80.95\% CSRs from the Norwegian language, whereas $19.04 \%$ were scored from Arabic. Finally, in NorNs, the proportion of CSRs.LV consisted of code-switch instances borrowed from Eng and Ar. The proportion of CSRs.LV from English was $90.90 \%$ as opposed to $9.09 \%$ of the CSRs.LV from Arabic (illustrated in figure 7 below).

Figure 7: The occurrence of CSRs.LV in EngNs and NorNs


The last two categories describe the results from Morphological and morphosyntactic CSRs and CSRs due to triggering (multiple words). Regarding the Morphological and morphosyntactic group of CSRs, no code-switch instances from this group were scored in NorNs. All instances were scored by the participants were from EngNs. Accordingly, of the total number of CSRs, the proportion of Mor.CSRs in EngNs is 2.25\% as opposed to 0\% of Mor.CSRs in NorNs. However, it is important to indicate the fact that all Mor.CSRs in English narratives were scored from Norwegian. The participants did not score any Mor.CSRs from Arabic into EngNs. Furthermore, participants scored multiple words CSRs (M.CSRs) in EngNs and NorNs. All instances in this category were scored from either Nor or Eng. No M.CSRs were scored from Arabic. However, of the total number of CSRs in EngNs,
we recorded a proportion of $8.55 \%$, whereas $13.95 \%$ of M.CSRs in the NorNs were recorded out of the total number of CSRs (see table 18).

Table 18: The occurrence of the M.CSRs in EngNs and NorNs.

| Narratives | M.CSRs | Language of switch |
| :---: | :---: | :---: |
| EngNs | $8.55 \%$ | Only from Norwegian |
| NorNs | $13.95 \%$ | Only from English |

## 5 Discussion

This study reported the results of two narrative tasks conducted with a group of 41 multilingual participants who speak L1 Arabic, L2 English, and L3 Norwegian. The experiment in this study investigated the likelihood of code-switching and cognate insertion as well as the direction of cross-linguistic influence. There were two main questions by which this study was motivated. For more convenience, they will be repeated here in this section.

Question 1: Are cognates more likely to be code-switched than non-cognates by SyrianArabic speakers?

Question 2: What about the direction of the switch among these three languages? What could have more influence on the direction? Is it the dominance or the typological proximity?

The narratives were elicited in two languages: English and Norwegian. We observed contrast between the instances of code-switching in the English Narratives (EngNs) 1.8\% (222/11769) and in Norwegian Narratives (NorNs) 0,74\% (86/11481). We hypothesized that the different numbers of the code-switch ratios in the EngNs and NorNs could be attributed to the participants' proficiency. As we mentioned in section (2.7.3), a study by Lanvers (2001) showed that the produced CS utterances by bilingual young children are higher when they speak the less proficient language than when they speak their proficient language. If we look at tables (3 and 4) in section 3.1, we notice that there were more proficient participants in Norwegian than in English. The majority of the participants belong to an intermediate proficiency level in English, whereas half of the participants were measured as upper-
intermediate in Norwegian. Carrying over these observations, we would conclude that proficiency played an essential role in terms of the number of the CS.Rs in the narratives in both languages.

Regarding the occurrence of cognates vs. non-cognates in both narratives, the frequency test in the English narratives showed that there are more non-cognates $71,9 \%$ (8468/11769) than cognate instances $27,9 \%$ (3293/11769). The high number of non-cognates would let us expect that the potential to code-switch non-cognates is more elevated than to code-switch cognates. However, the data of this study showed that there were more cognate code-switches 56.75\% (126/222), than non-cognates $35,13 \%$ (78/222) despite the frequent high occurrence of the non-cognates. This observation was confirmed by the statistical analysis, where it revealed that there were significantly more instances of code-switching among cognates than among non-cognates $(P$-value $=.00001$. in the English narratives.

Moreover, the frequency analysis was also performed on all Norwegian narratives. Again, the analysis showed that the produced non-cognates outnumber cognates. However, there was not a big contrast in numbers between cognates and non-cognates. According to the frequency test there were $56,27 \%$ ( $6461 / 11481$ ) non-cognates as opposed to $43,72 \%$ (5020/11481) cognates. Nevertheless, there were fewer cognates among the code-switching instances than non-cognates ( 37 vs. 44, respectively).

Additionally, the Chi-square test showed that cognates were not significantly more likely to be code-switched than non-cognate. Further, a comparison between the results of the narratives in both languages reveals that there was more insertion of cognates than noncognates in English narratives than in Norwegian narratives. In other words, the likelihood of inserting cognates from L3 Norwegian into L2 English was higher than from L2 English into L3 Norwegian.

A possible explanation for this contrast between the rate of cognates in EngNs and NorNs could also be attributed to the participants' proficiency and frequency of language use. According to Dijkstra \& Van Hell (2002) (see section 2.5.1), the proficiency level influences the cognate facilitation effect. Their study involved three languages L1 Dutch, L2 English, L3 French. The cognate facilitation effect was seen with English cognates but not with French cognates in the group that was not proficient in French. Unlike the first group, the cognate
facilitation effect increased in the second group, where participants had equal proficiency in L2 English and L3 French. These findings obviously indicate that there is an influence of language proficiency on the cognate facilitation effect. However, we still cannot understand how the influence of proficiency level on the cognate facilitation effect could explain why we had more cognates in the EngNs than in the NorNs. In this study, we should indicate that L1's (from Arabic) influence on the cognate facilitation effect was found to be substantial. If we put aside proper nouns, Arabic does not share a lot of cognates with English (the L2 in this study) and Norwegian (the L3). The reason for the lack of cognates is that Arabic belongs to a different language family, while English and Norwegian are both Germanic languages. A similar observation was made in Broersam's (2006) study that tested 3 Dutch-Moroccan bilinguals. Based on this, we can say that in our study, the influence of the cognate facilitation effect mainly comes from the language where the participants are also very proficient: L3 Norwegian.

Regarding the frequency of language use, the majority of the participants live in Norway, where Norwegian is the majority language. In addition, they are university and high school students, which means that the Norwegian input is more frequent and intense compared to English. Moreover, the statistical analysis showed that participants are more exposed to Norwegian than to English, and the difference, by conventional criteria, is considered highly statistically significant ( $P$-value $=.0001$.). A clear example of the effect of the language exposure was seen in the English narrative of participants (28).

Example (11): ...And the butterfly ... she run away eller ... fly .....

This participant has been living in Norway for more than 8 years. The participant's proficiency level in English and Norwegian shows that the participant is quite independent and fluent in both languages. Based on the data from the background, the participant started learning English at an early age, and the years of exposure are more than 20 years. Although the participant has been in contact with English for many years, the degree of exposure and the language use were not very high. According to the participant's daily exposure assessment (see Appendix D), the participant is more exposed to Arabic ( $40 \%$ ) and Norwegian ( $23 \%$ ) than to English (4\%). As we see in the example above, there is a code-switching instance of a
functional word. We presume that the frequent exposure to Norwegian (the community language) gave the facilitation for potential unintentional code-switching.

Furthermore, we presume that language proficiency and frequency influenced the participants' lexical access and the activation's degree of the lexical items. Szubko-Sitarek (2015) discussed how factors such as context, frequency, and imaginability could constrain lexical access. Based on this discussion and data we have on participants' proficiency, we assume that the participants' lexical access in the English language was more constrained than in Norwegian. As a result, we expect that the activation degree of the participants' English lexicon was weaker than the activation of the Norwegian lexicon. In other words, the English language is expected to be less activated than Norwegian due to the constrained lexical access the overall lower language proficiency. In addition, the non-selective perspective suggests that a competition between the lexical entries will be activated in the all languages of a bilingual. This means that when a cognate word is presented in one language, it will activate other neighbors in the other language(s). Accordingly, when participants in the EngNs say a cognate word in English, this word activates its Norwegian peer, and the competition between these two words will be activated as well. Since the constrained lexical access caused a weak activation in the English language, we expect that the representation of the English cognate became weak, and the strong representation of its Norwegian peer won.

In order to explain the overlap of Norwegian cognates with the English ones, we need to recall the models of speech production. According to these models, the lexical item occurs in two stages: in the first stage, the semantical representation of two lexical items gets activated and selected out of a set of activated lexical nodes. The phonological representation of the selected items, in the second stage, is retrieved, and the word is finally articulated.

Example (12): ....in the another picture I ser "see" that the boy.... (see Par (2), Appendix F)

This example is taken from one of the participant's EngNs. As we see, the participants codeswitched the word ser from Norwegian into English. What happened here, as we presume, was that the participant selected the intended meaning of the word "see" in his mental lexicon. This means that the semantical representation of that word got activated in the other language (Norwegian) as well. When it was the time to move to the next stage and retrieve the English phonological properties of the word see, the participant failed, and instead, he retrieved the

Norwegian ones. The Norwegian phonological properties of the word see were triggered first because of the solid phonological representation of this word in Norwegian. The high proficiency and the frequent exposure to the Norwegian language made it more activated; thus, less constraints were imposed on the mental lexicon in this language that facilitated the triggering of the Norwegian phonological properties faster.

Accordingly, we presume that participants were able to perform language separation in their Norwegian narratives, and thus fewer cognates were code-switched from English into NorNs. In addition, the high number of participants whose proficiency in Norwegian was measured as upper-intermediate (ca $50 \%$ ), can be considered another factor for the influence of proficiency on cognate's facilitative effect.

In conclusion, we would postulate that the low language proficiency and the limited exposure to English imposed constraints on lexical access. The constrained lexical access led to a decreased activation of the English language. This weak activation, in turn, caused an inadequate representation of the mental lexicon in the mentioned language. That is why we did not see many instances among the cognate switches from English into Norwegian, and the imbalanced activation led to more code-switching instances from Norwegian into English.

Our second research question concerned the factors that could affect the directionality of the switch. The focus will be on two main factors: language dominance and typological proximity. Language dominance was determined based on the participants' proficiency, recency, and the exposure to the languages. Accordingly, the distribution of these languages, in this study, based on the degree of dominance will be as follow: L1 Arabic, L3 Norwegian, L2 English. As we earlier mentioned, the proficiency test revealed that participants' proficiency is overall higher in Norwegian than in English. In addition, Norwegian is the community language, and therefore, the exposure to Norwegian is higher. Moreover, the Norwegian language, for the majority of the participants, is the most recent acquired language and most recent in use. On the other hand, the proficiency test in English showed that the participants are not as proficient as they are in Norwegian. In addition, English, for most of the participants, is not their most recently acquired language and used language, and their exposure to English seemed to be limited. With respect to typological proximity, we have two languages that belong to the same language family and one belonging to a different language
family. What we want to say is that there are two languages that share typological proximity (English and Norwegian) and one language that does not share typological proximity with neither of these two languages (Arabic).

The results in this study showed that there were only 9 CSRs from Arabic into English and only 5 from Arabic into Norwegian. At the same time, there were 81 of CSRs from English L2 into NorNs and 213 instances of code-switching from Norwegian into EngNs. This means that there were code-switches from all languages. However, the most interesting result was the limited number of the CS instances from the Arabic language into EngNs and NorNs. Several studies on cross-linguistic transfer emphasized the influential role of the first language. Based on these studies, it was reported that learners usually transfer their knowledge from their first language into the second one. This transfer can usually be seen in the form of unrelated structures the learners put from their L1 to produce oral or written utterances. Nevertheless, the results in this study do not indicate that Arabic L1 had such a strong influence, although it is the participants' most dominant language.

According to Poeste, Müller \& Arnaus Gil (2019), the typological proximity can be used as an alternative to the influence of dominance when language dominance fails to explain transfer. On the other hand, they also argued that typological proximity can only be a decisive factor in favor of CS if a relevant combination of languages is given. Based on this, we suggest that the typological proximity had no influence in the case of L1 Arabic since this L1 does not share typological similarities neither with L2, nor L3. According to these arguments, we can conclude that in this study, the observed CS instances from Arabic into both EngNs and NorNs were not produced due to the effect of typological distance.

Lüdi (2003) postulated that heritage speakers tend to use CS as a strategy to compensate inaccessible linguistics elements in their L1. If we apply this reasoning to our study, we hypothesize that these utterances in Arabic were produced due to lack of the corresponding linguistic expressions in participants' L2 and L3. If we look at section 4, we will see that there were not only cognates and non-cognates CS instances, but there were also some morphological and morphosyntactic code-switches. This means that aside from cognates and cognates, participants code-switched other linguistic elements in this study. In addition, we observed code-switches due to the lack of vocabulary. However, no morphological responses
were scored among the CS instances from Arabic. This means that most of the CSRs from Arabic were lexical or functional items (see example (13), Par: (4)).

Example (13): Alone uhm... baa'di kida "after that", so.. So..

Studies on plurilinguals showed that they have lexical gaps in all their languages. Additionally, the studies revealed that plurilinguals resort to CS to fill the gaps with items from their first language or their dominant language. In other words, the participants in this study resorted to the Arabic language when they failed to find access to certain elements from the other typologically related language. If we look at the example above, we notice that the narrative language was English. Also, we mentioned that English and Norwegian share typological proximity. Accordingly, the participant was expected to resort to Norwegian to fill the gap in the EngNs because CS tends to occur between more closely languages or between grammatical systems that are known to the speakers (Meeuwis \& Blommaert, 1998). Nevertheless, what happened was that the participant resorted to Arabic. This reliance on Arabic could be attributed to the fact that the participant did not know the equivalent of that word neither in English nor in Norwegian. As a result, the participant code-switched that word from Arabic into English.

Regarding the direction between English and Norwegian, we examined code-switches from both languages. In previous studies on bilingualism, it was observed that bilinguals codeswitch more when they speak their weakest language than their dominant language.
Nevertheless, the majority of the participants in the current study are unbalanced speakers of both languages. Their proficiency, according to the tests, is higher in Norwegian than in English. This difference in proficiency level explains the higher CS instances in the EngNs (English is the weakest language). In addition, the Norwegian language is the language which is frequently used by participants, and their daily exposure to this language is higher than to English (see Appendix D). Ecke (2004) found that the frequent usage and the recency of use of a language affect the degree of the dominance in that language. According to this finding, along with the observations we have from our participants, we can conclude that the dominance of the Norwegian language made it the strongest donner of CS instances, and therefore there were more code-switches from the Norwegian language into the EngNs than from English into NorNs.

Furthermore, we predicted that the low activation of Arabic would lead to fewer CS instances. We previously discussed that frequency and recency of the Norwegian language increased the potential for more facilitated lexical access, and thus the activation of this language increased. The key for that facilitated lexical access was the existence of cognates and their effect on code-switching in both Norwegian and English. Accordingly, we would propose that the limited number of CS instances from Arabic could be attributed to the lack of cognates. Due to the fact that Arabic belongs to a different language family, there are few, if existed, linguistic items or lexemes Arabic shares with English and Norwegian. Aside from proper nouns, we noticed that Arabic does not share many cognates with neither of the previously mentioned languages. Therefore, we suggest that the activation degree of the Arabic language will not be as high as that of Norwegian and English. Consequently, when a participant starts narrating a story in English (for example), the cognate utterances will activate the Norwegian ones, and thus both languages will be activated. On the other hand, Arabic does not have cognates that could facilitate the CS into English. Therefore, Arabic remained inactive, and the competition remains between the Norwegian and English lexicons. Based on this, we would say that dominance sometimes needs to be triggered by a stimulus. This stimulus, in this concern, was the high proportion of cognates in Norwegian and English.

Furthermore, we suggest that language proficiency, recency, and frequency of use have an influence on non-cognate code-switches. Ecke (2004) postulated that linguistic elements and lexicon are not forgotten, but the low activation caused by low frequency and recency lead to a reduction in accessibility to the information. Accordingly, we presume that the occurrence of a non-cognate utterance could be determined by its frequent usage in a language.
også katten prøver å få take ..eh.. The butterfly.. (Example (14), Par (13)) also cat-the try-pres to get...eh ..the butterfly..
"also the cat tries to catch the butterfly"

The example above is taken from a narrative produced by participant 13, who grew up in Norway and moved from the country after getting married. Despite the fluency in Norwegian, the participant showed some difficulty in remembering some words in Norwegian due to the lack of exposure and the low frequency of use of Norwegian. When the participant saw the
intended item in the photo, the intended meaning was activated in both languages (here, English and Norwegian). We conclude that the influence of the low frequency of Norwegian decreased the activation degree of some items in the participant's mental lexicon. As a result, the representation of those words became weaker, and thus they became inaccessible and difficult to retrieve. On the other hand, the representation of the English lexicon was stronger, which led to faster access. Accordingly, it was easier for the English word to be triggered first.

## 6 Conclusion

The goal of this study has been to investigate the cognates insertion and the directionality of cross-linguistic influence in multilinguals, who speak L1 Arabic, L2 English, and L3 Norwegian. Participants were asked to tell different stories in English and Norwegian.

In the English narratives, participants produced more cognate switches than non-cognates. According to the statistical analyses, the difference between these two was significant. In addition, it was noticed that all observed cognate switches were code-switched from Norwegian, and there were no cognates utterances from Arabic into EngNs. Additionally, participants inserted cognate instances into the Norwegian narratives as well. However, the number of cognate switches was slightly less than non-cognates. Further, the statistical analysis showed that the difference between these types of code-switches was not significant in the Norwegian Narratives. Again, no cognate Code-switches from Arabic into NorNs were observed. The potential to code-switch cognates existed in both narratives. However, the higher number of cognates in the EngNs was attributed to the dominance of Norwegian. In other words, language dominance played a decisive role via increasing the activation level of the Norwegian mental lexicon, and thus, the Norwegian lexicon obtained stronger phonological, orthographical, and semantical representation.

As we discussed above, there were code-switches from Norwegian into EngNs and from English into NorNs. In addition, there were also code-switches from Arabic into EngNs and NorNs. This means that we do not have one direction of the switch. In total, there were 222 code-switches in the EngNs. Only 9 instances were code-switched instances were borrowed from Arabic. On the other hand, there were 86 code-switches in the NorNs. Only 5 instances were from Arabic, and the rest were code-switched instances borrowed from English. This
leads us to the conclusion that Norwegian is the strongest doner, from which the majority of the instances were code-switched. Moreover, we found that although Arabic is our participants' dominant language, no strong effect of the L1's influence was observed in this study in terms of direction. In other words, the dominance failed to explain the direction of the switch. This can be attributed to the lack of typological proximity that led to a decreased activation level of the Arabic language. Nevertheless, the dominance's effect on the direction of the switch was observed between English and Norwegian. Both languages were activated due to the typological proximity they share. However, the high proficiency, recency, and frequent exposure to Norwegian facilitated the accessibility to the mental lexicon, and thus, the Norwegian lexicon became more activated.

Based on this, we can suggest that the dominance role might be more influential between languages that share typological similarities than the ones which do not share it.

### 6.1 Limitations and suggestions for future research

In this study, there are some limitations that should be taken into consideration. Participants are diverse, and they range from students to teachers. There are certain participants who work as teachers and teach at least one of the target languages. At the same time, the largest group of the participants were students who study at the university or at one of the high schools in Norway. A part of those students had experienced language interruption. In other words, their exposure to English was interrupted for a substantial period of time before arriving in Norway. Therefore, it would be a good idea to take into consideration the years of exposure to the target language. Furthermore, there were also some students who are studying majors where English is quite used and other students studying majors where English is a minor subject. This means that there were some participants who studied English and Norwegian simultaneously and other participants who acquired these languages successively. Additionally, the participants did not document their proficiency level in Norwegian. Their level in Norwegianwas assessed via self-evaluation questions in the background questionnaire. Moreover, the English online test was done by the participants themselves without the presence of the interviewer. Although the participants were asked not to repeat the test to enhance the results, we cannot be sure that they followed the instruction. In addition, it is possible that they got some help from a friend or a member of the family. All these issues
we mentioned may have led to increased noise in the information about the participants' proficiency in both languages.

For further research, it would be a good idea to divide the participants into groups according to their proficiency levels in both languages. Furthermore, it would probably help to provide more accurate results if we could subdivide the participants into groups based on whether they acquire these languages successively or simultaneously. Additionally, it would be interesting to elicit narratives in the participants' first language (Arabic) in order to examine if there is any effect from L2 and L3 on L1. We would also suggest looking at different word classes in relation to cognate insertion, trying to investigate whether the word class could affect the facilitation effect of cognates or not.

## References

$>\mathrm{Al}$ Heeti, N. H. \& Al Abdely, A. A. (2016). Types and Functions of Code Switching in the English Language Used by Iraqi Doctors in Formal Settings. International Journal of Advanced Research and Review, 1 (8), 10 - 18.
$>$ Androutsopoulos, J. (2007) 'Language choice and code-switching in German-based diasporic web forums', in B. Danet and S. C. Herring (eds) The Multilingual Internet: Language, Culture, and Communication Online, New York and Oxford: Cambridge University Press.
> Bartolotti, J. \& Marian, V. (2016). Bilinguals' existing languages benefit vocabulary learning in a third language. Language Learning, 67(1), 110-140.
$>$ Bernardini, P. and Schlyter, S. (2004) Growing syntactic structure and code-mixing in the weaker language: the Ivy Hypothesis. Bilingualism: Language and Cognition 7 (1), 49-70.
> Blumenfeld, H. K., and Marian, V. (2007). Constraints on parallel activation in bilingual spoken language processing: Examining proficiency and lexical status using eye tracking. Language and Cognitive Processes, 22(5), 633-660.
$>$ Bock, J. K. (1995). Sentence production: From mind to mouth. In J. Miller \& P. Eimas (Eds.), Handbook of perception and cognition: Vol. 11. Speech, language and communication (pp. 181-216). New York: Academic Press.
> Bolm, J. P., \& Gumperz, J. J. (1972). Social Meaning In Linguistic Structure: CodeSwitching in Norway. In J. J. Gumperz \& D. Hymes (Eds.), Directions in Sosiolinguistics: The Ethnography of communication (pp. 407-434). New York: Holt, Rinehart, and Winston.
$>$ Bosma, E., \& Blom, E. (2019). A code-switching asymmetry in bilingual chil dren: Code- switching from Dutch to Frisian requires more cognitive con trol than codeswitching from Frisian to Dutch. International Journal of Bilingualism, 23(6), 14311447.
$>$ Boztepe, E. (2003). Issues in code-switching: Competing theories and models. Working Papers in TESOL \& Applied Linguistics 3(2), pp. 1-27. Doi: 10.7916/D8ZP4JMT.,
> Broersma, M., \& De Bot, K. (2006). Triggered codeswitching: A corpus-based evaluation of the original triggering hypothesis and a new alternative. Bilingualism: Language and Cognition, vol 9, 1-13., doi:10.1017/S1366728905002348.
$>$ Broersma, M. (2009). Triggered code-switching between cognate language. Bilingualism: Language and Cognition, vol 12, 447-462.
> Bultena, S., Dijkstra, T., \& Van Hell, J. G. (2014). Cognate effects in sentence context depend on word class, L2 proficiency, and task. The Quarterly Journal of Experimental Psychology, 67(6), 1214- 1241. doi:10.1080/17470218.2013.853090. Published online by Taylor \& Francis, December 3, 2014.
$>$ Bultena, S. (2013). Bilingual processing of cognates and language switches in sentence context. Ipskamp Drukkers, Nijmegen.
$>$ Cabrelli Amaro, J., \& Iverson, M. (2018). Third language acquisition. In K. Geeslin (Ed.), Handbook of Spanish Linguistics. Cambridge: Cambridge University Press.
$>$ Cakrawarti, D. A. (2011). Analysis of Code Switching and Code Mixing in the Teenlit Canting Cantiq by Dyan Nuranindya. Semarang: Faculty of Humanities Diponegoro University.
$>$ Cantone, K. F. (2007). Code-switching in bilingual children. Dordrecht: Springer
$>$ Caramazza, A. (1997). How many levels of processing are there in lexical access? Cognitive Neuropsychology, 14, 177-208.
$>$ Chevalier, S. (2015). Trilingual language acquisition. Contextual factors influencing active trilingualism in early childhood. Amsterdam/Philadelphia: Benjamins.
> Clyne, M. (1967). Transference and triggering: Observations on the language assimilation of postwar German-speaking migrants in Australia. The Hague: Martinus Nijhoff.
$>$ Clyne, M. (2003). Dynamics of language contact: English and immigrant languages. Cambridge: Cambridge University Press.
$>$ Clyne, M. (2013). Dynamics of language contact: English and immigrant languages. Cambridge: Cambridge University Press.
$>$ Cook, V. (2003). Effects of the second language on the first. Clevedon: Multilingual Matters.
$>$ Costa, A., Caramazza, A., \& Sebastian-Galles, N. (2000). The cognate facilitation effect: Implications for models of lexical access. Journal of Experimental Psychology: Learning Memory, and Cognition, vol 26, 1283-96
$>$ Cunningham T. \& Graham, C. R. (2000) Increasing Native English vocabulary recognition through Spanish immersion: Cognate transfer from foreign to first language. Journal of Educational Psychology, 92(1), 37-49.
$>$ De Bot, K., \& Jaensch, C. (2015). What is special about L3 processing? Bilingualism: Language and Cognition, 18, 130-144.
$>$ De Bot, K., Broersma, M. \& Isurin, L. (2009). Sources of triggering in codeswitching. In Isurin et al. (eds.), pp. 85-102.
$>$ De Groot, A. M. B., \& Nas, G. L. J. (1991). Lexical representation of cognates and noncognates in compound bilinguals. Journal of Memory and Language, 30, 90-123.
> Dijkstra, Ton; et al. (2019) "Multilink: a computational model for bilingual word recognition and word translation". Bilingualism: Language and Cognition. 22.4 :657679.
> Dijkstra, T., The Multilingual Lexicon: In The Oxford Handbook of Psycholinguistics, by M. Gareth Gaskell, Gerry T. M. Altmann, Gerry Altmann, Paul Bloom. Oxford University Press, 2007. pp. 251-263.
$>$ Dijkstra, A. (2005). Bilingual visual word recognition and lexical access. In J. F. Kroll \& A. De Groot (Eds.), Handbook of bilingualism: Psycholinguistic approaches (pp. 178-201). Oxford: Oxford University Press.
$>$ Dijkstra, T., \& Van Hell, J. G. (2003). Testing the language mode hypothesis using trilinguals. International Journal of Bilingual Education and Bilingualism, 6(1), 2-16. doi:10.1080/ 13670050308667769
$>$ Dijkstra, T., Van Heuven, W. J. B. (2002). The architecture of the bilingual word recognition system: From identification to decision. Bilingualism: Language and Cognition, vol. 5, 175-197.
> Deuchar, M. and Muntz, R. (2003) Factors accounting for code-mixing in an early developing bilingual. In N. Mu" ller (ed.) (In)vulnerable Domains in Multilingualism (pp. 161-190). Amsterdam: John Benjamins.
$>$ Ecke, P. (2004a). "Language attrition and theories of forgetting: A cross-disciplinary review". International Journal of Bilingualism, 8 (3), 321-354.
> Ecke, P. (2004b). Words on the tip of the tongue: A study of lexical retrieval failures in Spanish-English bilinguals. Southwest Journal of Linguistics, 23, 33-63.
$>$ Ecke, P. (2001). Lexical retrieval in a third language: Evidence from errors and tip-of-the-tongue states. In J. Cenoz, B. Hufeisen, U. Jessner (Eds.), Crosslinguistic aspects of L3 acquisition: Psycholinguistic perspectives (pp. 90-114).
$>$ Eldin, A. (2014). Socio linguistic study of code switching of the Arabic language speakers on social networking. International Journal of English Linguistics 4(6), 78.
$>$ Engliana, E. (2013). «L2 and L3 Intrusions on L1 Production: Language Choice and Code-Switching in Indonesian Trilingual". Journal of English Language and Culture 3(2):69-115.
$>$ Fekete, Tamás. 2016. Anglo-Scandinavian code-mixing in English place-names. Studia Anglica Posnaniensia 50 (4): 5-23. https://doi.org/10.1515/stap2015-0018.
$>$ Friel, B. M., \& Kennison, S. M. (2001). Identifying German-English cognates, false cognates, and non-cognates: Methodological issues and descriptive norms. Bilingualism: Language and Cognition, 4, 249-274
$>$ Gagarina, N., Klop. D, Tsimpli. I.M. (2016). Narrative Abilities in Bilingual Children. Applied psycholinguistics 37, Cambridge university Press.
$>$ Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Valinaa, T., Balčiu ${ }^{-}$niene, walters, J., (2012). Main: Multilingual assessment instrument for narratives. Zentrum für.
> Garder-ChlorosP. (1997) Code-switching: Language selection in three Strasbourg Department Stores. In: Coupland N., Jaworski A. (eds) Sociolinguistics. Modern linguistics Series. Palgrave, London. https://doi.org/10.1007/978-1-349-25582-5_29
$>$ Genesee, F. and Nicoladis, E. (2007) Bilingual first language acquisition. In E. Hoff and M. Shatz (eds) Handbook on Language Acquisition (pp. 324-343). Oxford: Blackwell.
$>$ Gluth, E. (2008). Code-switching: Grammatical, Pragmatic and Psycholinguistic Aspects. An Overview Paper. Germany: GRIN Verlag.
$>$ Green, D. W. (2018). Language control and code-switching. Languages, 3, Division of Psychology and Language Sciences, University College London, Gower Street, London WC1E 6BT, UK. 8. http://dx.doi.org/10.3390/languages3020008
> Green, David W. (2017). Language control in the context of L3 acquisition. In Tanja Angelovska \& Angela Hahn (eds.), L3 syntactic transfer: Models, new developments and implications, 13-34. Amsterdam: John Benjamins.
$>$ Green, D. W., \& Wei, L. (2016). Code-switching and language control. Bilingualism: Language and Cognition, 19, 883-884. http://dx.doi.org/10.1017/ S1366728916000018.
> Grosjean, F. (1998). Studying bilinguals: Methodological and conceptual issues. Mental control of the bilingual lexico-semantic system. Bilingualism: Language and Cognition, 1, 131-149.
$>$ Gross, M., \& Kaushanskaya, M. (2015). Voluntary language switching in English- 47 Spanish bilingual children. Journal of Cognitive Psychology, 27, 992-1013.
$>$ Gumperz, J. J. (1982). Discourse strategies. Cambridge: Cambridge University Press.
> Hoffmann, C., \& Stavans, A. (2007). The evolution of trilingual codeswitching from infancy to school age: The shaping of trilingual competence through dynamic language dominance. International Journal of Bilingualism, 11(1), 55-72.
$>$ Hoffmann, C. (2001). Towards a description of trilingual competence. The International Journal of Bilingualism, 5(1), 1-17.
$>$ Hoffmann, C. (2000). Bilingual and trilingual competence: Problems of description and differentiation. Estudios de Sociolingüística, 1, 83-9
$>$ Hoffman, C. (1991). An Introduction to Bilingualism. New York: Longman.
$>$ Holst. S, (2019). A study of Code-Switching and Verb Second Transfer in L1 Arabic, L2 English and L3 Norwegian, Unpublished term paper, The arctic University of Tromso.
> Irmawati, M., Remijnse, L., Guna., A, (2018). The effect of cognates and word class on the comprehension of intra-sentential switches.
$>$ Jevtović M, Duñabeitia JA, de Bruin A (2020). How do bilinguals switch between languages in different interactional contexts? A comparison between voluntary and mandatory language switching. Bilingualism: Language and Cognition 23, 401-413. https://doi.org/10.1017/ S1366728919000191
$>$ Jared, D., \& Kroll, J.F. (2001). Do bilinguals activate phonological representations in one or both of their languages when naming words? Journal of Memory and Language, 44, 2-31.
$>$ Jacobson, R., (2011). Code-Switching Worldwilde. II. Volume 126 of trends in linguistics. Studies and monographs. Walter de Gruyter. Pp. 23-58.
$>$ Kachru, B. B. (1983). On mixing. In B. Kachru (Ed.), The Indianization of English: The English language in India (pp. 193-207). New Delhi: Oxford University Press.
> Kamwangamalu, N. M. and Lee, C.L. (1992) Chinese-English code mixing: a case of matrix language assignment. World Englishes, 10 (3): 247-261.
> Kamwangamalu, N. M. and Nkonko, M. (1999) The state of code switching research at the dawn of the new millennium: focus on global context. South African Journal of Linguistics. 17: 256-230.
> Kazuhiko Namba. 2004. An overview of myersscotton's matrix language frame model. Senri International School (SIS) Educational Research Bulletin, 9:1-10.
$>$ Kelley, A. \& Kohnert, K. (2012) Is There a Cognate Advantage for Typically Developing Spanish-Speaking English-Language Learners?. Language, Speech and Hearing Services in Schools, 43, 191-204.
$>$ Kim, L. and Rezaeian, F. (2007). Code-Switching in Persian/English and Korean/English Conversations: with a focus on light verb constructions. Proc. 23rd Northwest Linguistics Conference, Victoria BC CDA, 17-19.
$>$ Kootstra, G., J. A psycholinguistic perspective on code-switching: Lexical, structural, and socio-interactive processes. In linguae \& litterae, "Code-switching Between Structural and Sociolinguistic Perspectives", by Gerald Stell and Kofi Yakpo, (2015) Walter de Gruyter GmbH, Berlin/Munich/Boston ISBN 978-3-11-034354-0
$>$ Kootstra, G. J., van Hell, J. G. and Dijkstra, T. (2009). Two speakers, one dialogue. An interactive alignment perspective on code-switching in bilingual speakers. In: L. Isurin, D. Winford, \& K. de Bot (eds.), Multidisciplinary Approaches to Code Switching, 129-159. Amsterdam/Philadelphia: John Benjamins.
$>$ Kroll, Judith F.; Stewart, Erika., (1994) "Category interference in translation and picture naming: Evidence for asymmetric connections between bilingual memory representations". Journal of memory and language. 33.2,: 149
$>$ Labov, W. (1971). The notion of 'system' in Creole languages. In D. Hymes (Ed.), Pidginization and creolization of languages (pp. 447-472). Cambridge: Cambridge University Press.
> Lanvers, U. (2001). Language alternation in infant bilinguals: A developmental approach to codeswitching. International Journal of Bilingualism, 5, 437--464.
$>$ Lemhöfer, K., Dijkstra, A., Schriefers, H., Baayen, R. H., Grainger, J., \& Zwitserlood, P. (2008). Native language influences on word recognition in a second language: A mega-study. Journal of Experimental Psychology: Learning, Memory, and Cognition, 34, 12-31.
> Lemhöfer, K., Dijkstra, T., \& Michel, M. (2004). Three languages, one ECHO: Cognate effects in trilingual word recognition. Language and cognitive processes, 19(5), 585-611.
$>$ Lemhöfer, K., \& Dijkstra, T. (2004). Recognizing cognates and interlingual homographs: Effects of code similarity in language-specific and generalized lexical decision. Memory \& Cognition, 32(4), 533-550
$>$ Li, C., \& Gollan, T. H. (2018). Cognates interfere with language selection but enhance monitoring in connected speech. Memory \& Cognition, 46, 923-939
$>$ Liceras, J., \& de la Fuente, A. A. (2015). Typological proximity in L2 acquisition. The Spanish non-native grammar of French speakers. In T. Judy, \& S. Perpiñán (Eds.), The acquisition of Spanish in understudied language pairings (pp. 329-358). Amsterdam: Benjamins.
$>$ Lijewska, A. Cognate Processing effect in Bilingual Lexical access: In Bilingual Lexical Ambiguity, by Roberto R. Heredia, Anna B. Cieślicka, Cambridge University Press,( 2020). Pp. 71-88.
$>$ Lijewska, A \& Chmiel, A. (2014): Cognate facilitation in sentence context translation production by interpreting trainees and non-interpreting trilinguals, International Journal of Multilingualism, DOI: 10.1080/14790718.2014.959961
> Linck, J. A., Schwieter, J. W., \& Sunderman, G. (2012). Inhibitory control predicts language switching performance in trilingual speech production. Bilingualism:
Language and Cognition, 15, 651662.
$>$ Lindsey, Brittany (2006). Language Loss and Recovery in Heritage Language Learner Spanish: A Study on Code-switching. Divergencias: Revista de Estudios Lingüísticos y Literarios 4: 3-22.
$>$ Lloyd-Smith et al. (2019). Italian-German bilinguals: The effects of heritage language use on accent in early-acquired languages, the International Journal of Bilingualism.
> Lüdi, G. (2003). Code-switching and unbalanced " bilingualism. In J. M. Dewaele, A. Housen, \& W. Li (Eds.), Bilingualism: Beyond basic principles (pp. 174-188). Clevedon, UK: Multilingual Matters
> Macswan, J. (2000) The architecture of the bilingual language faculty: evidence from intrasentential code switching. Cambridge: Cambridge University Press.
> Malik, N. A., (2016). The Matrix Language Frame Model: An Empirical evaluation, department of applied linguistics, kinnaired College, Lahore
> Manfredi, Stefano, Marie-Claude Simeone-Senelle \& Mauro Tosco. 2015. Language contact, borrowing and codeswitching. In Amina Mettouchi, Martine Vanhove \& Dominique Caubet (eds.), Corpus-based studies of lesser437, described languages: The CorpAfroAs corpus of spoken AfroAsiatic languages, 283-308. Amsterdam: John Benjamins.
> Masciantonio, R. (1977). Tangible benefits of the study of Latin: a review of research. Foreign language Annals, 10(4),375-382
> Meeuwis, M \& Blommaert, J. (1998). A monolectal view of code-switching: Layered codeswitching among Zairians in Belgium. In: P. Auer (ed.) Code-switching in conversation. London: Routledge, pp 76-100.
$>$ Mehl, T.H. (2014). Attitudes and awareness around code switching. What are teachers' and students' attitudes towards codeswitching in the English learner classroom in Norway, and what can influence the teachers' utilization of it? Master's thesis retrieved from: http://www.duo.uio.no/handle/10852/40548
> Mrawushe, N.N. (2016). An investigation into the Educational Implication of codeswitching in a Multilingual school in Matatiele. MA in General linguistics. University of South Arfica. https://core.ac.uk/download/pdf/79170487.pdf
$>$ Muysken, P. (2000). Bilingual speech: A typology of code-mixing. Cambridge: Cambridge University Press.
$>$ Munoz, C. Cognate Recognition by young Multilingual language learners: The Role of Age and Exposure: In Third Language Acquisition. EuroSLA Studies 3, by Bardel, C., \& Sanchez, L. (2020), pp. 145-165.
> Myers-Scotton, C.M.; Jake, J.L. (2016). Revisiting the 4-M model: Codeswitching and morpheme election at the abstract level. Int. J. Biling. 21, 340-366.
> Myers-Scotton. C., \& Jake. J. (2008). " A universal Model of Code-Switching and Bilingual Language Processing and Production". [336-357].
> Myers-Scotton, C. (1993a [1997]). Duelling languages: Grammatical structure in codeswitching. Oxford, UK: Oxford University Press.
$>$ Myers-Scotton, C. (1993b). Social motivations for codeswitching: Evidence from Africa. Oxford: Oxford University Press
> Müller, N., Arnaus Gil, L., Eichler, N., Geveler, J., Hager, M., Jansen, V., Patuto, M., Repetto, V. \& Schmeißer, A. (2015). Code-Switching: Spanisch, Italienisch, Französisch. Eine Einführung. Tübingen: Narr.
$>$ Ng, C.W. (2018), Code-Mixing of Cantonese-English BilingualChildren with Different Language Dominance Patterns. Journal of English as an International Language
$>$ Nicoladis, E. \& Secco, G. (2000). The role of a child's productive vocabulary in the language choice of a bilingual family. First Language, 58, 3-28.
$>$ O'Shannessy, C., Typological and social factors influencing a new mixed language, Light Warlpiri. In Code-switching Between Structural and Sociolinguistic Perspectives, by Gerald Stell and Kofi Yakpo. Publications of the School of Language \& Literature Freiburg Institute for Advanced Studies, (2015). ISBN 978-3-11-0343540. pp 289-304.
$>$ Paradis, J., Early Bilingual and Multilingual Acquisition: In handbook of Multilingualism and Multilingual communication, by Peter Auer, University of Freiburg/Br., Germany; Li Wei, University of London, Birkbeck UK, (2008), Volume 5 of Handbooks of Applied Linguistics [HAL]. Pp. 15-33.
$>$ Paradis, J. and Nicoladis, E. (2007) The influence of dominance and sociolinguistic context on bilingual preschoolers' language choice. Int. J. Biling. Educ. Biling. 10, 277-297
> Paradis, M. (2004). A neurolinguistic theory of bilingualism. Amsterdam: John Benjamins.
$>$ Patuto, M., Hager, M., Arnaus Gil, L., Eichler, N., Jansen, V., Schmeißer, A., \& Müller, N. (2014). Child external and -internal factors in bilingual code-switching: Spanish, Italian, French and German. In A. Koll-Stobbe \& S. Knospe (Eds.),

Language contact around the globe. Proceedings of the LCTG3 Conference (pp. 191209). Frankfurt am Main: Lang
> Pearson, B.Z., Fernández, S.C., Lewedag, V. and Oller, D.K. (1997) The relation of input factors to lexical learning by bilingual infants (ages 10 to 30 months). Applied Psycholinguistics 18, 41-58.
$>$ Peeters, D., Dijkstra, T. \& Grainger, J. (2013). The representation and processing of identical cognates by late bilinguals: RT and ERP effects. Journal of Memory and Language, 68(4), 315-332.
$>$ Perez-Leroux, A. T., O’Rourke, E., \& Gretchen, S. (2014). Language Dominance and Codeswitching Asymmetries. In MacSwan, J. (ed). Grammatical Theory and Bilingual Codeswitching. MIT Press. Pp 283-312.
> Poarch, Gregory J.; Van Hell, Janet G., (2012) "Cross-language activation in children's speech production: Evidence from second language learners, bilinguals, and trilinguals". Journal of Experimental Child Psychology. 111.3, (2012): 419-438.
$>$ Poeste. M., Müller, N. \& Arnaus Gil. L. (2019). Code-mixing and language dominance: bilingual, trilingual and multilingual children compared, International Journal of Multilingualism, 16:4, 459-491, DOI: 10.1080/14790718.2019.1569017
$>$ Poplack, S. (1980). Sometimes I'll start a sentence in English y termino~ en español" Toward a typology of code-switching. Linguistics 18, 581-616.
$>$ Poplack, S. (1980). Sometimes I'll start a sentence in English y termino~ en español" Toward a typology of code-switching. Linguistics 18, 581-616.
> Putnam, M. T., Carlson, M., \& Reitter, D. (2018). Integrated, not isolated: Defining typological proximity in an integrated multilingual architecture. Frontiers in Psychology, 8, 2212. https://doi.org/10.3389/fpsyg.2017.02212
$>$ Pyles, T., \& Alego, J. (1993) The Origins and Development of the English Language. 4 th edition. Boston: Thomson Heinle.
> Rabinovich, E., Tsvetkov, Y., \& Wintner, S. (2018). Native language cognate effects on second language lexical choice. In Proc. of the Transactions of Association for Computational Linguistics.
$>$ Ringbom, H. (1987). The role of the first language in foreign language learning. Clevedon, Philadelphia: Multilingual Matters.
$>$ Rothman, J. (2015). Linguistic and cognitive motivations for the typological primacy model (TPM) of third language (L3) transfer: Timing of acquisition and proficiency considered. Bilingualism: Language and Cognition, 18(2), 179-190.
$>$ Rothman, J. (2011). L3 syntactic transfer selectivity and typological determinacy: The typological primacy model. Second Language Research, 27(1), 107-127.
$>$ Telstad, S., (2018). Investigating potential L3 cognate facilitation effects on L2-A study of Spanish-English cognates in L1 speakers of Norwegian. MS thesis. NTNU
$>$ Toassi. P., Mota, Teixeira. (2020). The Effect of Cognate Words on Lexical Access of English As a Third Language. Cad. Trad. Vol. 40 no.sep2 Florianopolis Sept./Dec. Epub Mar 10, 2021.
$>$ Turina, D. \& Altenberg, E. (1991) Compensatory strategies of child first language attrition. In H. Seliger et al. (Eds). First language attrition (pp. 207-226). Cambridge University press.
$>$ Sánchez-Casas, R., \& García-Albea, J. E. (2005). The representation of cognate and noncognate words in bilingual memory: Can cognate status be characterized as a special kind of phonological relation? In J.F. Kroll and A. M. B. de Groot (eds.), Handbook of bilingualism: Psycholinguistic approaches (pp. 226-250). New York: Oxford University Press.
$>$ Savchenko. E, (2013), A Contrastive Study of the English and Norwegian cognates from and fra. In Partial Fulfilment of the Requiements for the MA Degree, Department of Literature, Area Studies and European languages, University of Oslo.
$>$ Saville-Troike, M. (1982). The ethnography of communication: An introduction. Oxford: Blackwell.
> Schmeißer, A., Eichler, N., Arnaus Gil, L., \& Müller, N. (2016a). Mélanges interpropositionnels chez les enfants bilingues français-allemands: est-ce vraiment du code-switching? Language, Interaction and Acquisition LIA, 7(2), 238-274.
$>$ Schmeißer, A., Hager, M., Arnaus Gil, L., Jansen, V., Geveler, J., Eichler, N., Patuto, M., \& Müller, N. (2016b). Related but different: The two concepts of language dominance and language proficiency. In C. Silva-Corvalán \& J. Treffers-Daller (Eds.), Language dominance in bilinguals: Issues of operationalization and measurement (pp. 36-65). Cambridge: Cambridge University Press. Silva-Corvalán, C. (1983). CodeShifting Patterns in Chicano Spanish. In L. Elías-Olivares (Ed.), Spanish in the U.S
setting: beyond the Southwest (pp. 69-87). Rosslyn, VA: National Clearinghouse for Bilingual Education.
$>$ Smith, M., S. (1994). Second language learning. London and New York: Longman.
$>$ S.O.S. Ncoko , R. Osman \& K. Cockcroft (2000) Codeswitching Among Multilingual Learners in Primary Schools in South Africa: An Exploratory Study, International Journal of Bilingual Education and Bilingualism, 3:4, 225-241, DOI: 10.1080/13670050008667709
> Soto. V, Cestero. N, and Hirschberg. J, (2018), The Role of Cognate Words, POS Tags and Entrainment in Code-Switching. Columbia University, New York, USA.
> Schwartz, A. I., \& Van Hell, J. G. (2012). Bilingual visual word recognition insentence context. In J. Adelman (Ed.),Visual word recognition(pp. 129148).London, UK: Psychology Press.
$>$ Singh, R. (1985). Grammatical constraints on code-switching: Evidence from HindiEnglish. Canadian Journal of Linguistics, 30, 33-45.
> Sridhar, L. and Sridhar, K. K. (1980) The syntax and psycholinguistics of bilingual code mixing. Canadian Journal of Psychology. 10: 203-215.
$>$ Stedje, A. (1977). Tredjespråksinterferens i fritt tal - en jämförande studie. In: R. Palmberg \& Håkan Ringbom (eds), Papers from the conference on contrastive linguistics and error analysis. Stockhom \& Åbo, 7-8 February, 1977. Åbo: Åbo Akademi
> Szabo, C. Z. (2016). Exploring the Mental Lexicon of the Multilingual: Vocabulary Size, Cognate Recognition and Lexical Access in the L1, L2 and L3. Eurasian Journal of Applied Linguistics, 2(2), 1-25. https://doi.org/10.32601/ejal. 461007
> Szubko-Sitarek, W. (2015). Multilingual Lexical Recognition in the Mental Lexicon of Third Language Users. Berlin, Heidelberg: Springer. http://doi.org/10.1007/978-3-642-32194-8
$>$ Szubko-Sitarek, W. (2011). Cognate facilitation effects in trilingual word recognition. Studies in Second Language Learning and Teaching, 1, 189-208.
$>$ V. Soto, N. Cestero, and J. Hirschberg. (2018). "The role of cognate words, pos tags and entrainment in code-switching." in Interspeech, pp. 1938-1942.
> Van Hell, J. G., \& Dijkstra, T. (2002). Foreign language knowledge can influence native language performance in exclusively native contexts. Psychonomic bulletin \& review, 9(4), 780-789.
> Van Hell, J., Litcofsky, K., \& Ting, C. (2015). Intra-sentential code-switching: Cognitive and neural approaches. In J. W. Schwieter (Ed.), The Cambridge handbook of bilingual processing (pp. 459-482). Cambridge, UK: Cambridge University Press.
$>$ Van Hell, J. \& De Groot, A. M. B. (1998). Conceptual representation in bilingual memory: Effects of concreteness and cognate status in word association. Bilingualism: Language and Cognition, 1, 193-211.
> Wakasa, M. M., (2004). "The Matrix Language Frame Model of Code-Switching as Applied to Kiswahili-English Code-Switching in Kenya". MA. University of Nairobi.
> Wardhaugh, R. 1986. An introduction to sociolinguistics. Oxford: Basil Blackwell Ltd.
> Weil, L., Liu, X. (2020). Code-switchin as Bilingual Lexical Strategy. Studies in Linguistics and Literature 4(4):p84. doi:10.22158/sll.v4n4p84
$>$ Williams, S. and Hammarberg, B. (1998) Language switches in L3 production: Implications for a polyglot speaking model. Applied Linguistics 19, 295-333. Zipf, G. (1949) Human behavior and the principle of least effort. New York: Addison-Wesley.
> Wodak, R., Krzyżanowski, M. \& Forchtner, B. (2012). The interplay of language ideologies and contextual cues in multilingual interactions: Language choice and code-switching in European Union institutions. Language in Society, 41(2), 157-186.
> Yakpo, K, Code-switching and social change: Convergent language mixing in a multilingual society. In Code-switching Between Structural and Sociolinguistic Perspectives. By Gerald Stell and Kofi Yakpo, (2015). Publications of the School of Language \& Literature Freiburg Institute for Advanced Studies 259-287
$>$ Zheng, Y. (2012). Exploring long-term productive vocabulary development in an EFL context: The role of motivation. System, 40, 104-119.
doi:10.1016/j.system.2012.01.007

## Appendix A

| Name: |  |
| :--- | :--- |
| Age |  |
| Country of origin: |  |
| Country of residence: |  |
| Years of residency in Norway | Spe of Onset (English) |
| Age of Onset (Norsk) | Reading: |
| Native Language | Understanding: |
| English self-evaluation | Speaking: |
| Reading: |  |
| Current occupation | Understanding: |
| Norwegian self-evaluation language do you use |  |


|  | With friends: |
| :--- | :--- |
|  | In studies: |
|  | Social Media: |
|  | Leisure time : |

## Appendix B

Scoring sheet

| Categories | Numeral | In \% |
| :---: | :---: | :---: |
| Total Utterances in the narrative |  |  |
| Total Code-switched utterances |  |  |
| Code-switched utterances from NO |  |  |
| Code-switched words from Ar |  |  |
| Code-switched words from EN |  |  |
| Code-switched cognate Utterances |  |  |
| Code-switched non-cognate utterances |  |  |
| Code-switch utterances due to lack of vocabularies |  |  |
| Morphological and Morphosyntactic CS |  |  |
| CS utterances due to Triggering (multiple words) |  |  |

## Appendix C

## Participants' Background

| Participants | Country of origin | Country of residency | Native Language |
| :---: | :---: | :---: | :---: |
| 1 | Syria | Norway | Arabic |
| 2 | Syria | Norway | Arabic |
| 3 | Syria | Norway | Arabic |
| 4 | Egypt | Norway | Arabic |
| 5 | Syria | Norway | Arabic |
| 6 | Syria | Norway | Arabic |
| 7 | Syria | Norway | Arabic |
| 8 | Syria | Norway | Arabic |
| 9 | Syria | Norway | Arabic |
| 10 | Syria | Norway | Arabic |
| 11 | Syria | Norway | Arabic |
| 12 | Syria | Norway | Arabic |
| 13 | Iraq | Jordan | Arabic |
| 14 | Syria | Norway | Arabic |
| 15 | Syria | Norway | Arabic/Kurdish |
| 16 | Syria | Norway | Arabic |


| 17 | Palestine | Norway | Arabic |
| :---: | :---: | :---: | :---: |
| 18 | Palestine | Norway | Arabic |
| 19 | Syria | Norway | Arabic |
| 20 | Syria | Norway | Arabic |
| 21 | Syria | Norway | Arabic |
| 22 | Syria | Norway | Arabic |
| 23 | Syria | Norway | Arabic |
| 24 | Syria | Norway | Arabic |
| 25 | Syria/Egypt | Norway | Arabic |
| 26 | Syria | Norway | Arabic |
| 27 | Syria | Norway | Arabic |
| 28 | Lebanon | Norway | Arabic |
| 29 | Syria | Norway | Arabic |
| 30 | Syria | Norway | Arabic |
| 31 | Syria | Norway | Arabic |
| 32 | Syria | Norway | Arabic |
| 33 | Syria | Norway | Arabic |
| 34 | Syria | Denmark | Arabic |
| 35 | Syria | Norway | Arabic |
| 36 | Syria | Norway | Arabic/Kurdish |


| 37 | Syria | Norway | Arabic |
| :---: | :---: | :---: | :---: |
| 38 | Syria | Norway | Arabic |
| 39 | Algeria | Norway | Arabic |
| 40 | Somalia | Norway | Arabic |
| 41 | Syria | Norway | Arabic |


| Participants | Years of residency <br> in Norway | AoO Eng | AoO Nor |
| :---: | :---: | :---: | :---: |
| 1 | $5 ; 1$ | $11 ; 0$ | $23 ; 5$ |
| 2 | $3 ; 11$ | $10 ; 0$ | $20 ; 0$ |
| 3 | $5 ; 2$ | $6 ; 0$ | $38 ; 0$ |
| 4 | $2 ; 4$ | $13 ; 0$ | $42 ; 7$ |
| 5 | $4 ; 0$ | $10 ; 0$ | $23 ; 0$ |
| 6 | $2 ; 2$ | $6 ; 0$ | $20 ; 0$ |
| 7 | $5 ; 0$ | $10 ; 0$ | $28 ; 6$ |
| 8 | $2 ; 1$ | $10 ; 0$ | $21 ; 0$ |
| 9 | $3 ; 5$ | $10 ; 0$ | $26 ; 0$ |
| 10 | $3 ; 6$ | $6 ; 0$ | $19 ; 0$ |
| 11 | $3 ; 0$ | $4 ; 0$ | $35 ; 0$ |
| 12 |  |  | $4 ; 0$ |


| 13 | 25;0 | 6;0 | 3;0 |
| :---: | :---: | :---: | :---: |
| 14 | 3;9 | 10;0 | 40;0 |
| 15 | 5;2 | 7;0 | 17;0 |
| 16 | 5;2 | 10;0 | 28;0 |
| 17 | 12;0 | 10;0 | 13;0 |
| 18 | 7;0 | 6;0 | 13;0 |
| 19 | 5;4 | 13;0 | 33;0 |
| 20 | 4;11 | 6;0 | 20;0 |
| 21 | 5;1 | 10;0 | 27;0 |
| 22 | 4;0 | 12; | 18;0 |
| 23 | 6;5 | 10;0 | 31;0 |
| 24 | 6;0 | 10;0 | 26;0 |
| 25 | 2;4 | 4;0 | 12;0 |
| 26 | 5;3 | 10;0 | 22;0 |
| 27 | 3;11 | 3;0 | 14;0 |
| 28 | 8;0 | 6;0 | 48;0 |
| 29 | 5;1 | 8;0 | 21;0 |
| 30 | 5;0 | 10;0 | 27;0 |
| 31 | 4;9 | 10;0 | 26;6 |
| 32 | 4;0 | 6;0 | 21;0 |


| 33 | $4 ; 7$ | $10 ;$ | $25 ; 9$ |
| :---: | :---: | :---: | :---: |
| 34 | $22 ; 0$ | $7 ; 0$ | $4 ; 6$ |
| 35 | $6 ; 0$ | $10 ; 0$ | $12 ; 0$ |
| 36 | $5 ; 2$ | $12 ; 0$ | $18 ; 0$ |
| 37 | $3 ; 0$ | $6 ; 0$ | $12 ; 0$ |
| 38 | $3 ; 6$ | $13 ; 0$ | $19 ; 0$ |
| 39 | $5 ; 0$ | $29 ; 0$ | $34 ; 0$ |
| 40 | $5 ; 1$ | $6 ; 0$ | $21 ; 0$ |
| 41 |  | $10 ; 0$ | $19 ; 0$ |

## Appendix D

The approximate participants' daily exposure to Arabic, English, and Norwegian.

| Participants | Ar | Eng | Nor | Other | Eng Test |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 43,33 \% | $5 \%$ | 35\% | - | $42 \%$ |
| 2 | 45,83 \% | 28,83 \% | 28,33 \% | - | 46 \% |
| 3 | 41,66 \% | 2,5 \% | 39.16 | - | 61 \% |
| 4 | 38,33 \% | 10,83 \% | 52,5\% | - | 60 \% |
| 5 | 37,5\% | 25\% | 37,5\% | - | 79\% |
| 6 | 36,66\% | 20,5\% | 42,83\% | - | 59\% |
| 7 | 38,33\% | 2,5\% | 59,16\% | - | 61\% |
| 8 | 48,33\% | 9,16\% | 42,5\% | - | 59\% |
| 9 | 50\% | 10\% | 23.33\% | - | 66\% |
| 10 | 41,66\% | 1,33\% | 28,33\% | - | 54\% |
| 11 | 45\% | 10\% | 45\% | - | 44\% |
| 12 | 47,5\% | 10\% | 25\% | - | 62\% |
| 13 | 25\% | 64,16\% | 10,83\% | - | 88\% |
| 14 | 61.66\% | 3.33\% | 35\% | - | 52\% |


| 15 | 21.66\% | 22.5\% | 14.16\% | Kur 25\% | 62\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | 51.66\% | 0\% | 48\% | - | 55\% |
| 17 | 31,66\% | 3,33\% | 60\% | Turk 5\% | 53\% |
| 18 | 51,66\% | 15\% | 33,33\% | - | 66\% |
| 19 | 24,33\% | 30\% | 45,66\% | - | 79\% |
| 20 | 36,66\% | 20\% | 23,33\% | - | 78\% |
| 21 | 65\% | 8,33 | 26,66 | - | 70\% |
| 22 | 41,66\% | 21,66\% | 40\% | - | 58\% |
| 23 | 35\% | 33,33\% | $31 \%$ | - | 73\% |
| 24 | 51.33\% | 3.33\% | 28.66\% | - | 50\% |
| 25 | 35\% | 11,66\% | 36,66\% | - | 53\% |
| 26 | 38\% | 42,5\% | 2,5\% | - | 67\% |
| 27 | 35,83\% | 19,16\% | 45\% | - | 60\% |
| 28 | 40\% | 3,33\% | 23,33\% | $\begin{gathered} \mathrm{Gr} \\ 16,66 \% \end{gathered}$ | 81\% |
| 29 | 24,5\% | 15,83\% | 41,66\% | - | 49\% |
| 30 | 64,16\% | 1,66\% | 31,66 | - | 47\% |
| 31 | 45.83\% | 34.16\% | 20\% | - | 67\% |


| 32 | $25 \%$ | $4,16 \%$ | $25 \%$ | Kur <br> $22,5 \%$ | $55 \%$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 33 | $44,16 \%$ | $36,66 \%$ | $19,16 \%$ | - | $66 \%$ |
| 34 | $41,66 \%$ | $15 \%$ | $40 \%$ | - | $63 \%$ |
| 35 | $43 \%$ | $11,66 \%$ | $28,66 \%$ | - | $68 \%$ |
| 36 | $20 \%$ | $3,33 \%$ | $53,33 \%$ | Kur <br> $23,33 \%$ | $58 \%$ |
| 37 | $28 \%$ | $33,33 \%$ | $33,66 \%$ | Span 5\% | $60 \%$ |
| 38 | $43,33 \%$ | $18,33 \%$ | $21,66 \%$ | - | $49 \%$ |
| 39 | $18,5 \%$ | $21,66 \%$ | $56,66 \%$ | Fren |  |
| 40 | $29,66 \%$ | $23,33 \%$ | $43,66 \%$ | Som <br> $3,33 \%$ | $79 \%$ |
| 41 | $47,5 \%$ | $10,83 \%$ | $25 \%$ | - | $59 \%$ |

NOTE:

1. Tur is for Turkish
2. Kur is for Kurdish
3. Gr is for Greek
4. Span is for Spanish ; 5. Fren is for french

## Appendix E

Materials for method 2
"Picnic to the Park"

"Cat \& Mouse"


## Appendix F

# All Participants' Narratives 

Participant : 1

Narrative 1: Dog<br>Language of the Narrative: EN

Hello,
my name to ....my name is (participant's name), I want talk about eh .. the picture.... Eh.... in the picture i can see the boy and dog ...eh.... Um..eh... (the participant stopped and asked me in Arabic" what does Hadiqah *garden* mean?. I forgot") eh... garden „yeah, eh.. I can see gar ..eh .. the boy has the ballon and he had bag, i can see the bag ..... karton bag have eh.. And i can see house or eh.. The dog he is .. he is leik with the mouse, and the mouse uh,,,,, yeah ... eh... the boy watch the dog and the mouse is like before hi ...before ...befor him and eh... i can see also the ballon is fly from .. from eh... from ham.. Him eh... yeah, uh,, i can see also the dog is accidant ehh with the tre....... Uhm ..ok.. I can see in the bag he has hotdog.. Hot dog (laughter). Eh.. the balloon fly over the tre eh... the boy se the ballon eh he want to catching, he can't .. he can't.. He cannot catching. i can se the dog he watch the ba... eh.. He watch the bag uhm. $\qquad$ Yeah, eh.. The boy now he can catch the ballon uhm... over the tre and the dog he take the hotdog from the bag outside and eh...oh .. the boy cannot see the.... uh... eh.. FINISH :)

## Narrative 3: Cat

## Language of the Narrative: Nor

I dette bilde jeg ser eh.. Jeg ser en..en katt og..liten tre også ..og ser jeg stranda .. stranda ... ok....jeg tror ditte er ...ingebær (bringebær he means, "raspberry") tre dette er sjøen ved siden av fjell ...fjellet (clicking sound, participant said it is dark, without referring to that dark thing). Andre bilde, ja, vi ser at denne katt hopper over eh.. Tre eh.. Full av eh.. Fulle av eh..sommerfuel og så vi ser at en.. En gutt han har fiske.. Eh.. fiskegreie og tror han har fisk i .. [AMB] og han har under ha...under arm ball. Han har blå skjorte og.. (cleaning throat) og blå uh.. Bukse. Han har også han har på foten sandel og han har brunn.. Brunn hår (clicking sound). Eh ja, jeg tror jeg tror at eh.. Katten følte (i think he meant falte "fell") over tre også blir gutten bekymret av.. av summerfugel og han mistet ballen eh..ueh under arme og han se på fug..på fug han ser på sommerfuel eh.. Andre bildet vi ser at katten ser eh... det ser ..ser..eh.. Ja eh at katten ser at kat..eh.. At katten eh..ser eh.. til fiske eh.. I graver? Også at
ballen går over sjøen og ser at eh gutten han .. han ligger over armene og kne så han prøver å hente den ballen (clicking sounds). Ja, han brukte .. han brukte fiske greie for å hente ballen og (cleaning throat) vi ser at katten eh.. At katten eh.. Løpet av til eh..til fiske til fiske [AMB] og han han tok eh.. Hun tok fisk over,, over eh krov (participant tries to say probably "kurv"). ah til slutt vi ser at eh.. at eh at gutten har fikk ballen og han eh.. Han bli glad i ditte også at katten spiste nesten alle fiske.

## Participant : 2

Narrative 1: The Cat

## Language of the Narrative: En

(interviewer: just remember to say your name, oh, have already said it :); Participant: Ok)
In the picture eh.. I see one cat and sea og ..and tr... tree (the participant stopped and asked me about the meaning of the butterfly) the cat jumbin og eh .. over the tree and there is one boy with eh.. bh.. ball, ball , red ball and fisk, eh... fish i think they will fishing [AMB] yeah, (then he stopped and asked me if he can move to the next photo) that boy sjå "see"a cat falling on the tre and he left eh.. The ball, maybe he want to help the cat, but. ... in the another picture i ser that the boy..... falling the ball because the ball eh... in the sea, that a cat eh...... see eh.. fish ...... the boy, here in the ...in .this picture, the boy will take a ball of eh ...all the sea with a stake? for fishing, but the cat eh... eating all the fish that was with...with the boy.

## Narrative 2: The Dog

Language of the narrative : NO
(Participant: have you start recording?; Interviewer: it's ok. It's not a problem)
Her på bilde eg ser at eh...en hund følger en eh.. En mus musa går eh...til en tre går inn i en tre eg ser bak hunden på vei eller sånn eh.. En gutt og han har ballong, ja, hunden har eh.... (the candidate stopped and said he does not know the meaning of the word"leash") ok og der tre hus [Amb] like som rekke hus, hvit og orange med flere forskjellige eh...tak farger, rød, orange og grønn, ja og her på tredje bilde jeg ser en at.... mu.. Musen gikk fra andre sida av treet da hunden .......kom på treet så han skadet seg hodet.. Eh.. hodet sitt også gutten han mistet ballonen sin og ... og ballonen gikk opp på treet....eh gutten hadde... Hadde en pose med mat like som pølser. Når han mistet ballonen sin, han la posen i gulvet .... Og følget.. Han følgte ballon så han gikk på treet for å ta ned ballon da hunden se.. Så at.. eh. posen som maten i sånn gikk til posen og begynte å spise maten som hadde med gutten, var med gutten, men gutten .. eh.. Har tatt ballonen igjen av treet

# Participant : 3 

Narrative 1: The Cat

Language of the Narrative: En

(I asked the participant to start and he initiated with a small pray) eh.. In the first picture in the left we see eh.. A cat with eh..is .. trying to..to ..uhm..to play with the butterfly. we need to see også the whole picture about the.. Eh .. the sea or a lake eh.. The view is beautiful, maybe it's su..it's sun, and maybe it's summer. In the next picture eh.. the..The pussy cat is trying to jump over eh..a small tree eh and trying to ply .. trying to catch the butterfly while eh... a young man is coming.. Approach eh..The young man is holding eh..Eh.. I..I cannot be sure what he's holding maybe a basket with a food and a ball and fish stick he's joying to...to eh enjoying he will enjoy his time to eh.. By fishing today. (I said ok, and i said to him to wait for few second to show him the next two photos,..click sound) in the eh.. In the third pic... Picture eh the young boy is approaching towards the cat and the cayt.. The cat was afraid is afraid and trying to hide behind the.. The small tree. In the fourth picture the young man he he lost his ball and he's trying to catch it again while.. While eh.. The cat is ..is eh... trying to ..to hent the fish he caught it in the ,, in the ball.. In the basket .. the orange basket behind the guy, maybe the cat is hungry "Click sound again trying to open the last two pictures" eh.. Ya.. the fifth picture ..ya .. the fifth picture eh.. The young boy he..he ..he bring again the ball by using the fishstick while the cat hunted the eh.. Or to the fish and enjoy..both are enjoying, the cat is enjoying eating fish and the boy he is enjoying by having his own ball.

Narrative 2: Dog
Language of the Narrative: Nor
Her eh .. her skal vi eh.. prøve å forklare litt hva vi ser i..på bildet til venstre der vi s.. Der ser vi en liten mus og hund som leker sammen i nærheten av en gammel trær .... Eh..på bil.. på bilde nummer to .. på bilde nummer to ser vi.. Ser vi på bilde en.. En gutt som.. Som eh.. Enbare? (the participant wanted to say:" bærer", which means "carries")En.. et ballong gull ballong og basket som inholder mat kanskje og seh.. Og ikke minst eh.. hunden og musen
fortsetter å leke sammen i nærheten av det gamle trær (click sound). På bilde nummer Fire, på bilde nummer fire eh.. Hunden prøver å å gå in i trær til å finne ut kor.. Kor ligger musen, men musen er ikke inne men er bakside av trær. Med å..da..og på det andre eh.. Nei på det samme bilde vi ser at gutten har.. Har mistet ballong og eh...ballong eh.. Lå på eh.. Det gamle trær, så eh.. På det andre bilde ser vi at gutten prøver å gå opp på trær til å hente ballen eh.. Ballongen og hunden ligger seg på..på gress og.. og ser på ka gutten gjør (click sound). Eh... på bildet nummer fem til venstre, hunden er litt sulten så han begynte å hente maten og guten er opptatt med å hente sin... sitt ballong fra.. Fra trær. Endelig, på siste bilde .. gutten har.. Har hentet sitt ballong og hunden er.. Er mat.. (me: "ok) er mett kanskje mett.. Matt (the participant tried to explain what he wanted to say in arabic, and i answered "ok" as a sign that I got what he means)

Participant : 4
Narrative1: Dog
Language of the narrative: NO
(Although I explained to the participant what she has to do, she stopped me and asked me if she had to tell a story by describing what she sees. Besides, she asked again about the language whether she should speak English or Norwegian).

Jeg ser uhm hand (she means hund) og mus (she asked someone next to her about what mouse means in Norwegian, but I asked her to be independent) big hus og gress, gulvet med gress eh.. I.... i høyre bilde eh jeg se mann med balloon med hus med tre med hand eh... mus run og eh.. Hand bak mus eh.. Mann eh ....eh.. Eh.. (she asked, what does "carry" mean in Norwegian) bære..bære pause... Bære pose ... tamam "is that ok?" illi baa'da " the next one" i høyre bilde jeg ser eh.. Hand eh ser på mann eh... man se eh.. Ja, på ballon og tre eh.. Og eh bak i bilde uhm.. Hus og eh sammenhage? Eh.. det... det høyre men venstre bilde jeg ser tre og eh.. Hand eh.. Prøver å eh.. Prøver å behold mus eh.. Også i midt bilde uhm..man eh...ballon eh.. Det er fly (laughter) bare .. bare.. Det er nok (click sound). Ferdig (i answered we still have one set of photos) ja, eh...i venstre bilde jeg ser eh...man eh...prøve å beholde balloon og eh...opp tre.. Opp tre og eh..hand prøve se hva en pose i gulvet eh... i høyre bilde jeg se (laughter) hand eh.. Prøve... i.. eh.. spise mat inn pose og eh... mann behold ballon det er bistå? Vi holder balloon og... og beholde ballon eh.. Ferdig.

## Narrative2: cat

## Language of the narrative: En

(I asked the participant to start and she asked in return to make sure if she has to tell this story in English, and I said yes)

Jeg s.. Eh ikke nei...eh.. I see eh... i picture uhm...sea og eh... and eh.. Grønn land eh jeg see..eh i see katt.. Eh cat eh se eh for two butterfly over tre. Eh... (laughter) eh neste picture, next picture uhm.. I see eh.. The sea and eh grønn land ehm.. cat try eh.. Catch butterfly eh.. Over.. butterfly fly over til, ikke til, until eh....høy.. Eh.. også.. Også i see man eh.. Hold ikke hold .. holder eh.. Ja, bottle with fisk i ehmm, ka venstre hva heter (laughter), ja right, ikke right også, right, da ismaha eh, dana nseet? " how do we call this, i forgot", right uhm.. Eh i eh....ikke right hand men (laughter) catch bottle med fisk. Eh..eh..I right hand eh...catche under eh...under arm ball eh... and stick til fisk eh.. Ikke ja, aha ok in. eh.. Man see cat eh..Over tre eh... ball falt uhm... eh.. eh..Falt.. down .. falt down eh... han.. He eh.. Think eh..maybe can eh.. hjelpe katt. Hjelp katt ok. Eh.. i..i right picture jeg se man sit i land og se and se eh...eh .. ball see ball i sea and eh... (laughter) cat se til eh.. Te..eh.. Se eh.. I mellom, gjennom, nei, through eh.. Bottle eh fisk .. eh .. fish.. Tenker ca.. Maybe eat fish. Eh.. man try eh...catch ball med stick eh.. Fish eh.. fi fish yeah.. Fisher eh.. But katt,eh.. but cat catchin eh..fish (laughter). Eh.. next eh.. Bilde eh (laughter) man catch eh.. Ball and eh.. Cat eating fish.

## Narrative 3: Picnic to the park

Language of the narrative: EN
(i asked the participant to start) eh... i see tree eh.. Rain, mountain, ball eh.. Color ball eh rød eh.. Red bil eh.. Red car eh... fish, children eh...leker, nei (laughter, and she asked in arabic how to say yela'bou "they play" in English) eh.. Og dog.. And dog (ME: "OK) eh... story (the participant asked, and i answered yes) yes, story..eh.. Children (participant said:"forgot what does yela’bou") ah, play ja, (laughter) eh.. Children play eh.. Together ..eh use ball og ikke og and eh.. Play together uhm... eh but ("i forgot, i forgot many words in english" the participant said) eh... but uhm them se eh..dog eh...play eh.. Alone uhm... baa'di kida "after that", so.. So eh.. Re..red bi eh..car red car rød car til ..nei..eh .. go (participant: "a'yza oul hatta" she asked about how to say TO +someplace) until.. Until mountain, but suddenly.. Suddenly (laughter) eh.. Weather is eh.. Was eh.. Rain ...eh.. Children.. Children eh.. Go with eh.. Parent eh... until sea eller beach eh.. So uhm.. There eh.. Uhm.. color fish eh... (the participant asked if she can stop, because she said that it was difficult to remember the words)

Narrative 4: Cat \& Mouse
Language of the narrative: NO

Eh..jeg ser på bilde eh..I høyre nei i venstre eh..glass eh..og katt og ost, gull ost ok (laughter, and she asked her little daughter, who was sitting and watching, not to talk). Eh...og mus, og jent.. jente og eh..Som bilde til hus som stua eh...melk ja, bilde til melk og glass med vann. Eh...jente bor i eh.. Hus eh..Fint hus . det er kjøkkenet ikke stua, det er kjøkkenet unnskyld. Eh..(laughter) eh..Jente kom til kjøkkenet eh..oh.eh..Og se mus spise ost. Eh..hente katt til behold eh...mus... eh..fordi jente eh..lyst eh...hva heter .. lyst uhm..på .. har lyst på eh..Drikke melk og vann .... Ferdig (laughter).

## Participant : 5

Narrative1: Dog
Language of the narrative: NO
(interviewer: "you can start") ok the first picture (interviewer interrupted: "Norsk". Participant: "Ah norsk, that's true") eh..I det første bilde så ser jeg eh..På en hund og en mus. Jeg tror at hunden bli.. Blir nysgjerrig og vil leiter etter denne .. vil leite etter denne eh.. Denne musen. Eh..han.. Han løper etter hun og så går den under en tre.. Et tre. Han eh.. Han er (the participant here murmured many things which are not understood). Også i bakgrunn så har vi et hus også en vei.. lang vei som går. Også det er en mann som har en pose og en ballon..eh..Gull ballong på denne høyre armen også eh..en pose og jeg ser at han har pølser der inne, og han går mot dem.. Mot eh..mot treet, hvor eh..Denne hendelsen skjer (click sound). Ja, og så, se.. Også mister mann plutselig ballongen og den flyr vekk av han og blir fast der i mellom to eh..To bransjer to eh..To [AMB] i.. I treet. Han ser .. ja eller ja er bare hoppet der. Også i mens han er opptatt med å finne ut av hvordan kan han ta denne nede eh..Ikke miste den, så ser jeg at den hunden der har det litt vanskelig på å få tak i denne musen. Han er faktisk eh..Han gir litt opp, men jeg ser at han merker.. Plutselig så er det en anna rett han kan få ved siden av så det var ikke eh.. Slutten av verden enda, så han bare tenker kanskje .,.han begynte å slure? litt og han har lyst på de pølsene der (click sound). Etterhvert så får mann tak i ballongen som er eh...som var på tre. Han eh..Er litt glad samtidig, så ser vi at hunden er nesten der hvor pølsene er også prøver han å f.. Å ta .. dra en.. en av dem ut av posen. Mann i andre bilde er jo glad i ballongen også tenker at den er shut greit. Den er ikke skadet og hunden i bakgrunn ko.. Koser seg med .. med de pølsene der. Han har glemt alle de trøbbele eh..Han .. han fått å gjøre med musen.

Language of the narrative: En
(participant: in english, Me: Ok, participant replays: ok) first i see i see a cat that is looking .. etter a butterfly and i s.. i see .. grass and i see a mountain in the background ..eh.. Ja there is a s.. A little bush where eh... ja this butter fly is trying to [AMB] over. Maybe the cat thinking about hunting the.. The butterfly uhm... ja, in (participant:"should i move to the second picture?", Me:"yea") in the second picture i.. I noticed the cat is actually to jump and to catch this butterfly where eh.. This butterfly just running away and flying away eh... because of the cat, and there is a boy with a blue shirt, t -shirt, coming . i think he is thinking about fishing eh.. Or eh.. He was .. he was fishing because he has fish so and he has basketball or some kind of ball. Eh.. ja, (click sound, interviewer: "ok", this one") ok, now in this in the picture i can see that the cat here is stru.. Struggling because she felt into the.. The and it has a lot of like spiks and eh.. Ja, damaging the plants uhm... and then i see that the boy has noticed that and maybe will come to .. to .. to help the cat but as soon as he notice he miss the ball and the ball went to the sea eh... and then ja, i see that the cat is looking at the fish, maybe she is thinking about eating some, i mean it is better than the butterfly of course. So ja. The boy is getting the ball back eh.. He is using his .. his.. .. his.. Ja fishing tool . he's getting back the ball and eh.. meanwhile, the cat is stealing a fish, or actually eating it just right away in the same place. Enjoying it. The guy is happy, the boy is happy in the eh... next picture ... the other picture and the cat is also happy but ya,, i wonder what his reaction will be after he sees that (interviewer: "ok").

## Narrative3: Cat \& Mouse

## Language of the narrative: No

Eh... ja, jeg ser eh.. Ja, kjøkken, et bilde for et kjøkken også har vi eh.... Ost, en katt eh.. Et glass, mus, i...eh.. En liten jente, en boks med melk og et glass med vann. Uhm.. jeg kan tenke meg på en liten scenario her. Uhm.. la se alle de tingene som er der eh... finnes i kjøkken eh man kan finne eh... ost, glass melk og alt mulig eh.. Blant annet kan man finne en katt og en mus og de henger ofte der og det eh... det er fullt mulig det uh... en historie man kan lage at den lille jenten har gått inn i kjøkkenet også plutselig så ser hun på en katt, og denne katten eh.. Prøver å finne på noe, det var noe som er fast inne i mellom to ting eller under benken la å si, og da går eh jenten og sjekker på.... også finner hun [AMB] er en liten sånn mus som prøver å spise en liten del av denne eh.. Ost som har falt der kanskje noen dager siden eh... og da blir hun litt... hun vil ikke at katten skal drepe den musen der, så hun tar litt melk også uhm... heller litt i et glass eller et annet ting også gir den til katten slik at kan bare drikke litt melk i stedet av drepe den musen der. eh ja, (participant: var det nok eller..?, "was that enough or...?")

Language of the narrative: En

The first picture, we have a tree, green tree, the second one is a fish with $\mathrm{m} .$. multiple colors we have (interviewer: speak higher please) eh.. A fish with different colors, i see rain a picture of rain or drops of water, i see... a ball, and uhm.. With colors as well. The.. There is small kids og er gliding down on the glider or a slide eh.. I see a mountain with ice on top or snow on the top and there is a car eh,, red one and a dog. Right?, (interviewer: "yea"). Eh... the story? (interviewer: "nothing just keep going"). Now i can try to make a story out of it (cleaning throat) ok, i'm thinking about in the beginning, i'm thinkin.. I am thinking about a family. This family are made of three kids, two.. I think two boys and one girl and eh one day they decided to go to the amusement park or a park where there is some places for the kids to play around. Eh.. the dog they have get.. Got excited as well because he knew that they are leaving so they thought to take him with them. So all of those guys uhm...got into the car and the father start driving to the park. Eh.. on the way they saw a beautiful mountains. They were far away with some clouds around them, and the kids asked the father why does it have uhm... some snow white.. Is it white on the top. so The father said it is cold and usually when you g.. When you go higher in eh.. In levels or in layers of the earth so it's got. It's get colder and that's why the.. the water there is frozen. They proc.. Proceeded their way to the park and suddenly eh... they were driving and there was a green tree on the way that almost fell [AMB] because there was alot of wind and it start raining. So the kids were.. Were asking the father if it's ok to play outside while it's like this, and he said:" yea it's might just take some time and it's gonna ... it's gonna disappear. So i don't think it's gonna last long because i.. i saw the.. the .. the broadcast today, the broadcast of the uhm.. Weather broadcast and ithink it's not gonna last long". So they preceded going there to this park and on the way the father tried to make uhm.. Kind of eh.. Cozy... cozy uhm...atmosphere for his kids and he.. he said: "you know who is having it really good right now or in.. in..in a such situation, the fish you know, they could enjoy the water more than us because they live in the water. So those fishes can go swimming .. swimming and smiling while it's raining not like us where we get wet and maybe disturbed. They reach the.. The and they found the the rain was .. has stopped and they were so happy about it so they went straight to the glides and they started gliding down. It was a little bit wet in the beginning, but they make it eh.. Dry with their clothes eh...and they start paly something, some eh.. Flying ball games, they found a ball which has a lot beautiful colors almost all colors of the..uhm spectrum and they start playing with it.

## Participant: 6

Narrative: Dod

Language of the narrative: No
(Interviewer: tfadal, "you can start") i dette bilde ser jeg en eh... hund med en liten mus en... og hunden vil jaktet til hus... eh.. Ikke.. til mus. Og så musen løper under en.eh en tre..et tre.. Og så med en gang eh.. Løper hunden (interviewer: alli soutak shwai "can you speak higher") og med en gang løper eh.. Musen eh.. Etter eh.. Under tre så føller hunden eller hunden bare ja løper etter mus da, neste, ja. Så kommer en eh... en gutt han hadde ba..ballong med seg også han mista ballongen i dette tre samtidig eh.. Denne hunden eh.. Fikk hode sitt i .. tre så fikk vondt, men (clearing throat) og han kunne ikke catche eh musen men ...
(participant whispering something not understandable) ja, så ballongen til gutten stuck i.. I tre så .. han.. han.. Han ah han hadde med seg kjøtt eller en pose med kjøtt eller eh.. Pølser... usikker, ja så ...han..han gutten la posen på gulvet og skulle prøve å hente ballongen den gule ballongen fra tre. Så det.. Ja.. det.. Det fri.. det... det friste.. Hunden bli frista av eh.. Dette pose eller denne posen også løpte med en gang til å stise? Kjø.. eller spise pølsen som er i posen , men samtidig gutten kunne eh.. Få tak i av ballongen som var stuck i treet også han .. gutten fikk tilbake ballongen sin også huden spiste pølsen.

## Narrative2: Cat

Language of the narrative: En
(interviewer: you can start, Participant: tamam " $o k$ ") eh... in this picture i can see eh... eh... grå cat and maybe eh.. Yellow ... butterfly eh... eh.. Blue sea ...a.... Beautiful landscape and maybe i can see a lot ..lot..i..i.. I don't what i should call it, but i go for a small tree i don't know, and it's clearly that this cat in this picture eh.. Try to catch the.. Yellow butterfly. (interviewer: "ok", Participant: "tamam, "ok"; mnih, "is that good?"... should i talk about both photos?; Interviewer: kamel, hiee kissa, "keep talking, it is a story. Participant: ah, ok. I will tell a story ") so when the cat try to catch the butterfly so she eh.. the cat fell in this little tree, and then it's come a fisher, i don't know. Eh.... and he has box with eh.. Fish that he fished and $\ldots$. He (participant murmured something i could not understand)....ok.. And it's seem that eh... he missed the ball.. The red ball and ... no.. ok ... now i can understand.. Eh he saw the cat, the cat fall in this little tree, but he carry a red ball and he missed the ball so when he gonna go to help the.. the cat so he missed the ball so he left the cat and he just gonna go to catch the ball that it's in the sea (participant: tamam, "ok") ok, so he.. He catch the ball with his stick, i don't know, and he.. , and the cat eh gå in to the fish and eat the fish. (interviewer: ok).

# Participant : 7 

Narrative 1: The Dog

Language of the Narrative: En

I started with some instructions...

Here I am see eh.. I see a tree and a dog and a mouse and eh...eh..In the background I see four houses, the w...eh the first with white wall and the second with yellow wall, and i see the third behind.. Behind them with white wall and green roof and i see eh...here is, it's like eh...A way and the dog he thinking he .. he's wondering what the mouse doing .. is doing $\ldots .$. (he stopped and asked me in Arabic if he has to say something about the picture on the left side of the screen).. After.. after the dog was wondering, he decide to play with the mouse... I see behind of them a boy with a yellow balloon and he... and eh...with yellow balloon in his hand .. in his right hand and with purple.. Purple t-shirt and blå jeans. And with ... his with eh and his eh..in in his left hand he has a bag.. I think I finished. yes.. The first picture i see the balloon who the balloon is flyed to the eh.. To the tree and the boy fe.... uhmm he try he trying to follow it and the dog also trying to follow the mouse, but he stuck the hole.. in the hull in the tree. The second picture, i see the dog was enough with playing with the mouse and the bøy .. and the boy he lay he lay down his bag bes ehh..in the side of wall ...of way and he try he is trying to get his ballon down ....... I think i finished.... In the first picture the bøy... the boy after the boy try.. Try to get his balloon....and eh.. ..he's jumping to get it.. .in the behin.. Behind the boy i see the dog he try to get it he try to get what in the boy's bag and he is wondering if it .if it eh....If it eh...an.... Eh.II can see.. If the dog can eat something from the bag. In the second picture, i see that the boy he succeed to get the balloon and the boy he succeed to get the food from the boy's bag and both of them was happy because they did it what they ..what .. what they tried .. tried to get it.

## Narrative 2: Cat

## Language of the Narrative: No

(interviewer: tfadal, "you can start"; Participant: yes) eh...jeg ser her at eh...der som eh...veldig fint vær. Jeg ser at det er eh...vår og ....som eh...en elv. Ved siden av elven er sånn litt starnda og.. Det har en eh..En kat og katten eh..Prøver å leke med sommerflu, eh..Sommerflyen..og eh... og eh... sommerflyet at står på en eh...busk også ... her på andre bilde, prøver katten å leke, å hoppe mot sommerflyet.. Og så eh...sommerflyet blir redd og flyr bort av katten og så på bakside av bilde ser jeg en gutt. Gutten har på,, på seg mange ting som er fiske eh.. Fiske jo .. fiske greie og en bøtte har med en bøtte like sånn små fisker og på
andre hånda har fisketan... eh stang og like som eh.. en ball, røde ball, ja, og alle fornøyd. Her på det dette bilde ser jeg at katten blir eh...som eh...eh...som stuck inn i...eh...skepp? Inn i små tr.. små tre så gutten observerer det og så han blir overraska og skal gi.. Og så Prøver å komme mot katten og hjelp.. og hjelpe eh.. Han . og så han kaste eh.. Han Kaste bøtten... ballen og bøtte og kommer mot katten til å hjelpe også se.. Også ser her er det sommerflyet like som flyr over katten og ser på hva som skjer. Også på andre bilde, så... så ser jeg at katten klarte.. Klarte selv å gå ut av busken men gutten mista ballen i...i eh... ut i vannet og han eh.. Like som lei seg av at han mista ballen oh..ja, ja andre bilde. .... Også ser her at eh... gutt.. Gutten ha...absolut har på seg en blå eh.. Genser og blå eh... kan vi si at er turbukse. Og har med støvler eh.. Prøver å.. Å få å få tak i ballen $\sin \ldots$ den rode ballen som er ut i vannet, mens katten blh.. Ser fiskene eh..inn i bøtte og så prøver å få tak i eh...i samtidig fiskene, prøver å ha .. a... middag .. også andre bilde ser jeg at eh...begge.. Begge to klarte å få tak i det som ønske som gutten har fått tak og...og klarte å ha ballen sin og samtidig jeg ser at eh... at katten klarte å får tak i maten sin som er fiskene til gutten og så ha e...han er fornøyd, men eh.. Hvis han ser litt bak eh.. Til katten som vil bli litt sin og litt ufornøyd, men det er veldig fint vær ser jeg eh.. Og alle fornøyde.

## Narrative 3: Cat \& Mouse

## Language of the Narrative: No

(Interviewer: tfadal "you can start") yes, her ser jeg et tomt glass, ser jeg ved siden av en katt og.. En gul ost og en mus ei jen.. Også en lille jente barn og en eh.. Ser her en eh kjøk.. Kjøkken .... Og ser her også eh.. En bokse? melk også en..et glass som er full av melk og en eh... også et glass vannet, som er full av vann. Nå vi ser.. Tenker vi litt og skal vi lage en eh... eventyr .... Så.. tenker jeg først eh.. Det er lille jente har likesom ... han er litt ... hun er litt eh... tørst og litt ehg.. Sulten og tenke å drikke på veien melk først og etter det eh.. Kanskje er litt vann . han skulle spise .... Frokost ....og i vanlig.. I vanlig spise hun til frokost ost med brød med litt frukt... også det er ..eh.. Også de i huset i huset det finnes .. i huset som eh... den lille jente bor i.. Det finnes en katt hun er veldig glad i katten sin ... også... også... eh....men plutselig kommer en likesom en lille.. Lite mus .. og han blir ikke redd av musen fordi ... hun veldig .. veldig glad i .. i dyr sånn eh... hun tenker å hjelpe den.. Den musen litt også .. og så gir han litt av osten .. en liten bit av osten også.. Også pleide hun å spise frokost med sånn ost og melk og sånn mens.. Mens [AMB]musen å spise med henne liten ost også og katten bli litt nervøs fordi han ikke så glad i eh..I mus ... men hun.. Hun eh..Gir litt melk til katten så da katten blir fornøyd og bli likesom opptatt av å drikke melken i.. Ja.. også ... også tror jeg veldig viktig å drikke vann for henne som barn ved siden av melken og det var en eh... som liten, kort eh..histiria (means historia) eller eventyr om det lille barnet og musen og katten

# Narrative 4: Picnic to the park 

## Language of the Narrative: En

(interviewer: Jahez? "Are you ready?", Participant: ja, Interviewer: tfadal, "you can start" ) here is, i .. i see here eh... it's one tree and eh... a... fish and eh... rainy, eh.. Rain, and ball, and three kids playing, and mountains, and a red car, and a dog or a bobby, and if he.. Eh.if .. if he will i make eh..A story of these pictures, i can.. i can see .. hmm... i can see ...it's like a rainy, it's like rainy day it is heavy rain and eh.... The kids they hope ..or they eh... they would... they would like to eh.... To go a trip with eh... with eh... they own bobby or eh... dog and eh.. And they will play with... they will play eh.. with the ball.. With ball and... and they took a car the car was a red, was red and they took car to the forest because I s.. I see a... there.. It's eh.. Tree and in.. in the eh... in the forest, it was ... it's like eh... a lake and in the .. in the lake ..there is a fish ... a fish is swimming and it's.. It's like both .. both kids and fish is happy ... and ...i think.. I think it was .. it was eh... very nice trip and very nice journey for the.. For eh...those three kids and they enjoy in this trip. I think i finished.

## Participant : 8

Narrative 1: Dog

## Language of narrative: En

I se the dog eh... and the mouse and the dog with eh.. The mouse to eat... to eat eh.. It ..i maybe and eh.. I se the tre and the ... the gress and the tree house and the ... ja.. (participant: tamam, "is that ok?"; Interviewer: hai el-soura, "this picture"; Participant: ihki a'n hai elsoura?, kaman bl enklizee sah'?, "should i talk about this picture? also In English, right? "; Interviewer: Aha) i se the dog eh... and .. eh and the dog it's happy and he eh.. He come to eat the mouse and the mouse run inside the tre and eh.. I se the boy which have a yellow ballon. And eh.. I still see the tree house. Eh.. ok. Nå i see the dog which crush the.. the..The head in the tre on the tre and eh.. I saw the mouse on the another side of the tre eh... and i.. I see the boy which have eh.. Which los.lost the... yellow ballon and he is surprised ....ja... on the another picture i see the ....the boy which have missed the ballon opp the tre and eh... and i don't see the mouse, but i see the ... the dog which eh.. Sit don.. Back or..ja.. Pos..ja.. Back the boy ..um.. ...ja, nå i can see at the boy have get the ballon and eh.... And i see the dog which eh... open the... the..b.. I do not know the s... ja the bag maybe and he stick? the ... the food i don't know what is this ja... and in the another picture i saw at the boy have getted the ballon in the hand and the.... And i see still the dog which started to eat the food.

## Language of narrative: No

(Interviewer: narwigi, 'Norwegian"; Participant: narwigi, ok "Narwegian, ok"; Interviewer: yes, tfadali "yes, you can start"; Participant: ballesh, "can i start"; Interviewer: yes)
eh... jeg ser en katt også som ser på et sommerful. Eh... sommerful som sitter eller flyr over blomster. Så jeg ser også havet og gress og fjell også på høyre.... Se på høyre bilde jeg ser også en katt.. En .. vent litt.. Jeg ser ikke hvem er øverst på grunn av våres bilde. Jeg ser en.. En katt som har prøvd å... å hoppe eller å eh.... Å fange sommerful for å spise det, men... det klarte ikke det tror det, også jeg ser en gutt som... som kommer til å fiske ja, eh... ja. Eh.ja, nå ser jeg at katten har settet fast på eh... inn tre eller en den eh... .ja, kanskje litt tre ja. Jeg s.. Jeg ser at katten sitter fast inn med litt vondt kanskje, også.. Ser jeg gutten som stor bak katten og ser på katten som han er litt overraskende eh... også han har med seg balle også sommerful har flydd på [AMB] ja. også på andre side ser jeg en.... Ser jeg at gutten har ... har mistet ball på havet som prøver å... å ta den tilbake eller bare sitter å se på den, også jeg ser at katten har sett fisk som gutten har, ja ....nå ser jeg at eh... gutten har klart å.. Klarer å ta ballen ut fra vannet også ser jeg at eh.. Katten.. Bak han som har klarte også å fange fisk, og spise den kanskje . også på høyre s.. Ja.. på høyre side ser jeg at ... gutten har med seg ball også han er litt.. Han er glad, også katten sitter på eh.. Gresset bak han også spiser fisk også koser seg (giggling). (Interviewer: ok).

## Participant : 9

Narrative 1: Dog

## Language of Narrative: No

Eh...jeg kan se en dog som ser på... lille mus, kanskje vil eh..Jakte det, men i de andra eh...um...bilde til høyre. Eh...eh..Dog har eh..Gikk etter musen og eh..Og jeg kan see også opp til høyre eh...en gutt som bærer eh..Gull ballon. Eh..til venstre eh...eh..Dog er um..Nede av tre og .. mus til venstre, men eh..Denne gutten ser på hva skjer der og balloon.. Det gule balloon uhm.... Gikk opp, men til høyre ..eh..Balloon eh...stor opp eh...i den tre ...og eh..gutten opptatt eh på det, men eh..Dog har sett eh..kanskje liten mat på en pause. Gutten eh...vil eh...gå opp til å hente den ballong, mens eh...dog eh..Vil ta maten fra eh den pose å spise den men eh..Til høyre uhm...gutten er fornøyd fordi han tok den balloon og stor eh...står nede av den tre mens eh..Dog er opptatt med å spise eh..Den pølse fra posa.

Language of narrative: En (Interviewer: Tfadali, "you can start")

Eh.. i can see eh a cat eh.. A focused cat on butterfly eh.. Which is standing on the flower and eh there is eh a sea and eh.. Grånn ground and... it looks like the cat eh.. Want to um.. Eh want to jump on the butterfly, that's it. And in the second eh picture i can see that eh... oh the cat has overdy (already)jumped on the butterfly and the butterfly uh..... Run away from the flower and escaped. Yes, eh.. A boy eh who is uhm catching with fish and eh.. A ball eh... who is suddenly eh.. Saw what's the cat eh.. Did and why that the cat was stuck with the uh.. Eh flower. In the second picture eh.. It looks like uhm.. The boy eh.. Doesn't have the fish maybe eh... missed them and there is a ball on the left, red ball, and it's looks like the cat has seen the uh.. The fish on the right and it looks like eh.. it's very happy eh to eat them. Uhm the boy has catch eh the ball , the red ball eh but while that, the cat also has catch the fish and eh.. Want to eat them, but in the second picture, uhm.... I can see that's he's busy with seeing the ball, the red ball eh while the eh.. The cat uhm... there is eh the boy is already eh... smile because he already catch the red ball, but the cat is busy with eating the fish.

## Narrative 3: Cat \& mouse

## Language of narrative: No

(Interviewr: tfadali ya ...., "you can start")
Uhm.. jeg kan se et glass av eh...tomt glass og en katt, eh..ost, kjøkken, eh...lille jente, mus, melk, og vann ..gla.. eh. et glass eh..med vann, full of vann. En gang eh..Det var en lille jente som har våknet opp i midt av natten. Eh..hun var veldig tørst og ville drikke litt vann og da han gikk til kjøkken... husket hun også kanskje den lille katten som hun eh..eh...liker kanskje hun også er tørst og han kan eh...lage litt melk til den eh..Lille katten, men eh..Far? å bære den tomt glass til å ligge litt eh...vann, plutselig det var en litt og det var eh..Mus innen i kjøkken og da jente eh..Var eh var ikke redd fordi han liker eh...dyr og kanskje tenkte at mus er også vil litt mat og kanskje vil spise little ost fordi de var uhm... mange maten opp på banken til kjøkken og kanskje musen vil spise litt,... ja ferdig.

Language of narrative: En
(Interviewer: tfadali, "you can start")
Eh..there was a family who has three children eh...decided to go eh in a picnic eh...and they have also a little eh..Lovely dog. Eh...they went together with eh...a red car. Uhm.. on the way they saw eh a lot of eh beautiful mountains uhm... and they were all of them happy uhm... when they arrived to the park, eh they saw a tree eh a very big tree in the beginning of the ca.. On the park. Uhm.. then they went eh to see eh.. Many animal there and they saw eh.. A colorful fish eh it was very beautiful then eh after the eh the trip inside the park, they went and paly together uhm..With one of the place that eh.. Play eh.. with eh a very big ball and then they played together with eh one of the children plays ah, but it was eh.. Even though it was a very beautiful day in the evening when they come back, it was eh... a raining weather eh... so eh.. They enjoyed the trip and come back home in the evening. (interviewer: sawani bas, "few seconds please")

## Participant : 10

Narrative 1: Dog

## Language of narrative: No

Ej ser i dette bilde eh.. Et hund og en mus og også en trær,.. En tre eh.. Musen begynte å kom inn til huset hennes og... og.. Hunden eh.. Løpet av.. av musa det.. Ej tror det er .. høst fordi det er ingen eh plander i inni i trær. Eh det var fint vær fordi også en man .. han.. Har på seg ..en... eh... en eh t-shirt and eh.. Også (giggiling) en balon, en gull balon og .. han gå rundt i gata og sånn. Han sånn kose seg. Ja, det var eh.. Det skjer at eh.. Gutt han mistet baloon og han begynte å løpe for å hente det, men han ser ut som trist, fordi han mistet eh balloner og han har på seg ... han ... og hunden som prøver å kom inn eh.. Inn i huset .. kom inn til eh.. Huset ..mus hus også eh.. Han gutt har på eh han handler eh.. Inn på pose som har kanskje mat og hunden er glad når han sa det og han kom.. Han begynte og han.. Han begynte å gå mot eh.. Pose ..ja og... eh.. Gutter han eh.. Han har på seg .eh.. Han begynte å hente balloner og han ser ut som han er glad og smilende eh..og.. Og hunden begynte å spis.. Det var ... inn på pose det var en kjøtt .. det var kjøtt og hunden begynte å se.. Var veldig glad å se det og han begynte å spise det og gutter han fikk eh.. Gull balloner.. Han var veldig glad.

## Language of narrative: En

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(Participant: [AMB]; Interviewer: yalla, tafadli, "come on, you can start")
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I se in the picture eh en katt he eh.. Beside of tre and he is in the beach and eh .. tre, and flowers, and she want to came the tree (giggling). Another picture he was eh.. She was in the cat he ju..jump .. jump.. Opp in the tree he want to eat the... butels... ok oh... "Participant: bas ma baairef, hek wala lazem shou?; "that's it. I do not know is right like that or what $i$ should do? "; Interviewer: ma fini bh'ki "i cannot talk to you"; Participant: naa'm?; "what"; Interviewer: ana mafini almek, had lazm yekoon hakek inti, "I cannot learn you what to say, it should be your own narrative" Participant: inno shou lazem..., ok "that what i should..,ok" Interviewer: shou shaife houn mahal ma am asherlek, ana rah sadek shwai w asherlek. "What do you see there where i put the indicator, i can help you a little and point to the thing you should talk about"; Participant: tamam, "ok")

Here in the b.. blogger, nei ikkje blogger waller? i en.. I norsk eh.. It was very beautiful beach and rolig and eh.. And god.. Katt he want i do not know what he want. Another picture in the boy he ... he want to play.. Football and he .. he have eh.. Nei.. he has a... a fish.. He want fishing and eh.. Ok.. he um.. And katt he want .. he opp in the tre and eh he.. he the boy he mistet ball in the beach.. In the sea... ok.. Uhm.. and cat he.. He maybe he hungry she want to go eat the fish ... and eh.. This boy.. When he eh... missed ball he want to come back to ... to give him to give this... and he.. He.. jeg glemte.. He glemte .. this fishin .. fish a'ssa "stick" what its name og.. Plutselig he.. He fikk the ball and eh.. He this boy was happy and cat he.. . he fikk fish and he.. She.. she.. Eating.. She very happy to eat the.. This fish som boy ..... Eh.. ok boy very happy very ... smiling because he win? He ... fikk ball and. Fish and eh.. katt..he...eating fish.

## Participant : 11

Narrative 1: Dog

Language of narrative: Nor
(tfadali "you can start")
Ej ser det er ..r.. En hund og der muset også og det hund han også sulten og han tenker med mat. Derfor han.. Han prøv..de å .. å.. (giggling) jeg vet ikke ka det på norsk men kanskje det er uhm.. Jeg vet ikke. Ka .. catch [AMB] catch uhm.. Ja, jeg vet ikke (Interviewer: ok) ka.. På norsk men .. men han sulten og han tenke på mus eh.. Også han.. Det er hus , trær, grass, ja. Neste bilde det e ... eh.. Det e en gutt kommer med også med brød, jeg tror det og unnskyld,
han kommer med også ballon. Eh.. han glad, men han eh.. Ogs.. også vi ..vi har hund, hun..hund prøvde også å tatt i mus men.. He.. he... gå til gå inn trær. Eh.. en ballon han bli fly eh.. Gutt han er ... trist uhm.. Hund er tatt på..på ..eh..på trær. Mus er glad fordi han eh.. Eh.. ikke han eh.. Fordig hund kan ikke tatt han,.. Tatt mus. Eh.. også neste bilde eh.. Ballon gå og.. Stick.. Jeg vet ikke ka det på norsk, stick the ballon opp. Uhm.. hunden er sulten han tenke på brød, det.. Ka e det brød eller ... jeg vet ikke men kanskje, ja og det er pose med brød. Uhm ... og hund.. Hund tenker med det. Uhm, ja. Okei, uhm.. Gutten prøvde å tatt ballon, men det kanskje det litt vanskelig. Han spring? opp og.. Hund han .. bruker det sjansa og tatt mat fra pose og .. de..å. Ikke der.. Der ikke, Der ikke brød, der pølse og ja også gutten han glad han kan tatt ballon og hunden begynte å spise.

## Narrative 2: Cat

## Language of Narrative: Eng

(Interviewer: okey, tfadali, Sah, "ok, you can start, right?"; Participant: a'an awal surah sah?, "about the first picture, right?"; Interviewer: yeah, hon, "yeas, right there"; participant: a'an awal surah, "about the first picture")

Eh...I watched the cat. It in ...it's near the sea and eh...uhm..she watching the... sommerfugl (gaggling) med tree også we have a lot of gre..gree..grees,.. Gress uh.. And eh a lot of [AMB]. yes, only this. (interviewer: el soura elli ba'daa, shou saer hon?, "what happens in the nextpicture?") eh also i were the boy she's come with eh.. With eh... with box...this bott.. Bottle også he ha.. He have fish i think in this bottle and eh.. The cat is jumping on the .. eh.. Sommerfugel and a lot of tree with eh.. Apple i think that it's.. I don't exactly what's maybe it's app.. No it's eh.. Wa.. eh.. Flowers. A lot of flowers on the tree and also we have eh.. S..strand m.um.. Sea also and the boy he going å fishing. And the second.. Third picture is also cat jumping on the tree and ithink she have a lot of eh.. I don't know what the name [AMB] in english, but eh.. Yes. and the boy also it's surprise what happened with.. With the cat $\mathrm{a} .$. and also watch the ball and hei.. He have a lot of fish also and how fishing that fish. Ehm.. yes. (Interviewer: next) okey, also the boy it's throw the ball in...i ..i don't exactly get ehm..eh.. Aw.. who is throw the ball, but i think the boy it's.. She ah she.. He ... he.. See the ball and eh.. Thought who is the threw the bool.. The ball and eh.. Uhm... the cat, it's hungry, she thinks in the fish, she.. Will going og eating all the fish maybe, and eh.. Yes, only this. Ah okey, eh... the boy is eh.. She.. he.. He.. he ehm.. He m.. trying å take the ball and bath.. And b eh.. The cat it's.. It's eh... eh.. Go og eating the fish and eh.. And he can catching the ball and the fi.. The cat he can også eating all the fish. (Interviewer: okey)

## Participant : 12

Narrative 1: Dog

Language of narrative: Nor

## (Interviewer: tfadali, "you can start")

Okey, eh.. I denne første bilde me se en tre, en hund, en mus og hus.. Også og me se en hund look.. Look eh..på musen også .. denne mus skal kanskje gå inn i darkhoushe "holw" . i andre bilde (laughing) me se en hund.. Mus men nå me har en gutt med... kanskje bal.... S.. ikke sikker bas [AMB] det er sekken med balloon, også denne mus ... gå .. away fra denne hund også han gå på tre, je. (khalast, akid saea' jiddan, bas,.. Ok, "i finished and i know this bad but,..ok") eh.. Tredje bilde denne hund khabat "crashed" inn tre. Eh.. også denne gutt kanskje som surprised, også han mistet hannes balloon. I fjerde bilde han kom å prøv kanskje å ta balloon fra treet, også hund sa på denne sekken...er det fisk kanskje eller sånn?. Fjerde bilde...eh femte (shou a'am bhki, "what am i saying?"). Denne gutt kan få tilbake denne balloon, men også me se at hund få denne ting som pølse eg tror... på bal?.. På sekken eller på.. Pause, ja.. Pose eg tror . i siste eg tror me.. Me sa at ok han kanskje denne gutt bli som glad at han fikk balloon igjen.. Tilbake, men også hund bli glad at han fåkk.. Fikk denne pølse også fra denne gutt.

## Narrative 2: Cat

## Language of narrative: En

(Interviewer: ha nballesh, hai awal sourah, " we will start, this is the first picture"; Participant:
English?; Interviewer: aha. , right?; participant; Interviewer, sah, sorry ", right, sorry")
Ok, first picture, we see sea, cat, butterfly, tree, and the cat looked to butterfly, and .. and the next picture, we have cat butterfly,boy with the ....um..Football, yea, and fish, and um...å see the cat catch the butterfly, but the butterfly flying um, ya, just. And the boy comes to .. to what we don't have (deep breath9, ok the next one...here we see the butterfly flying and the ball falt fra the.. Boy and,.. Yes.. the cat in the tree and in the next one when boy go to the sea and hent..uh.. Take ball and .. we see cat look to the fish and maybe it go to catch one or something ya. Third one, the boy had the ball, but the cat also take the fish and we see in the last picture, cat eat all the fish maybe or we have two again, but the boy have the.. The ball ya.

## Participant : 13

Narrative 1: Dog

Language of narrative: En
(Participant: ille a'la el yamin wla ille a'la el yasar, "the one on the right or the one on the left"; Interviewer: hon, hon "there,right there"; Participant: sahmak had, ok, "this is your indicator, ah ok")

Ah.. i'm seeing a tree, and i'm seeing a dog trying to catch a mouse. it might be a public garden or ... ah i see some houses as well. uhm i can .. i can see that the tree does not have any leaves on it. It looks.. The weather looks a bit gloomy, it's not very sunny, and.... Yeah, i see three lovely houses in the background, one of them is white, the other is orange, and they think the third one is also white and black. Ok. okay. And now i see uhm.. That the dog trying to catch the mouse. He fell in..t.. his head. Uhm on the tree, and i see a boy and he might be thirteen year old boy [AMB] lost his balloon. It got stuck in the tree, and his face looks very, uhm.. Sad that he lost his yellow balloon, so he just trying to .. follow the balloon, I guess. Okay, and now i see the uhm.. The boy trying to catch his balloon back. He jumped a bit high to catch the balloon that got stuck on.. on the tree, and i see in the back a dog that is trying to eat the hot dog uhm.. Found the bag that the boy haven't had. He seems very hungry and very happy to.. To see the hot dogs and the balloon.. An.. and the .. the boy also looks very happy that he [AMB] to catch his yellow balloon.

Narrative 2: Cat

## Language of narrative: NO

(Interviewer: tfadal, "you can start")
Okey, uhm.. Så det ser ut at det er en veldig fin, deilig dag. Jeg ser en pus..uhm.. eller en katt kanskje uhm.. Som er nærmere til sjøen og eh..... Katten prøver å få tak eh... (participant: nseet el kelma, butterfly, "i forgot the word, is it butterfly", goggling) so, uhm...ja.. Det ser veldig koselig ut, været veldig fint. På det andre bilde ser jeg en liten eh.. Ikke liten gutt, men.. Kanskje en femten-seksten year ol..eh.. Seksten gammel gutt som skal uhm.. Kanskje gå fiske ... uhm..jeg tror det var nesten alt, men.. Eh.. men katten, jeg ser også katten prøver å få take ..eh.. The butterfly.. Ja du kan gå videre til neste (interviewer: vær så god, "here you go") okay, å nå se jeg uhm.. Se jeg gutten som holder noen fisker og ..har.. Jeg vet ikke kanskje ehh. Han.. har mistet ballen den røde ballen og uhm han ser ut veldig hverken
nervøs.. Eller.. Ikke så veldig glad uhm.. You know .. og uhm.. Jeg bare ser katten har .. har.. Har noen problemer kanskje uhm...vet ikke.. Kanskje.. Eh..jeg har glemt hva ordet er egentlig men kanskje eh,,ih..hun kommet inn seg busken hvis det er dere ..uh det ordet. På det neste bilde ser jeg at gutten har uhm... mistet ballen sin i sjøen og prøv.. Prøver å få tak i den røde ballen og jeg ser at katten er itt sulten og har lyst til å gå å spise de fiskene. Ja det var nesten alt . okei, også nå se jeg gutten uhm.. Har klart å ta ballen ut fra sjøen og er veldig glad, men .. men katten uhm..Mens kat.. katten ligger bak og gutten og har fått tak i fiskene og veldig glad de ser veldig gode fisker ut .. og på den neste ..bilde ser jeg .. at gutten uhm.. Holder den rød ballen i hånden.. Hånda og eh.. at katten har spist og all.. Alle fiskene.

## Narrative 3: Cat \& Mouse

Language of Narrative: Eng
(Interviewer: tfadali, "you can start"; participant: lazem sammi kol wahde, "should i name each photo?"; Interviewer: ah, hee shutout eltajrobe hek," yeh, this is how the experiment should be conducted")

Okey, starting from the lap, the upper lap. We have an empty glass, then we have an orange ah..Cat, a cheese, uhm.. A slice of cheese, and a mouseah.. Agr.. eh a young girl, and the kitchen, milk, and a full glass of water, almost full glass of water. Yes, are you ready, (interviewer: yes) okey, perfect.ok, Så my name Anne-Sophie i'm a young little girl, i'm six year old. I.. once upon a day, i walked into the kitchen to find my Mom cooking. I was so.. So thirsty, i just wanted to.. To have a glass of water. Though my Mom and sister they should have a glass of milk every morning and not always start my morning with water, i do not like milk though. I was craving for water. We started arguing and then, a small slice of cheese, fell off the counter of the kitchen on the floor, then there was a small .. a mouse that started smelling maybe the cheese and just came wandering around the kitchen. Our uhm..little cat named Coco, saw the.. Saw the mouse wandering around the kitchen and just started to .. to run after the mouse and then the entire kitchen just became a mess. My Mom got so angry and told me ..uhm.. That she.. you need to take Coco outside of the kitchen and then come back to drink your full cup of milk. (Interviewer: okey; participant: good?; Interviewer: Yes.)

Narrative 4: Picnic to the park

## Language of narrative: Nor

Okei.. uhm..Okei så jeg heter Johan (imaginary name), og idag er det søndag. Æh...det var veldig deilig park så eh..Mamma og Pappa skal ta oss og mine to ..eh..Min bror og min søster til lekeparken. Uhm..det var veldig deilig vær. det var.. Så vi.. vi tok pappas rød bil til å gå.. Til å.. Til å gå til lekeparken. Det var veldig deilig vær, vi så, vi så mange fjell.. Eh..på veien til
lekeparken. Uhm...det så.. Så nå vi når vi gikk til lekeparken bare mange tre der, det var deilig vær, uhm...vi begynte å leke litt rundt. Eh..det var også .. uhm...vi begynte også leke med våres hund uhm..Mamma og pappa vi også lekte med ballen spilte fotball litt med pappa. Det er veldig koselig, alt for gøy også eh..Også .. begynte det dessverre å regne ... plutselig.. Så det var litt trist. Så så mamma og pappa at vi må dra hjem snart, men jeg og min søster og min bror hadde lyst til å leke uansett hvis det begynte å regne. Uhm..det var også ... også gikk vi til sjøen til å.. Etter det uansett at det begynte å regne, så gikk vi til sjøen til å fiske litt og vi så mange fisker der, men mamma had.. Bla.. hun bla veldig.. Hun ble veldig sint også nå er det tid til å dra hjem fordi været blir verre og verre. Så da ..uhm..Tok vi bilen tilbake hjem og .. da veldig fin dag. (Interviewer: perfect; participant: ok? Inshallah tkoun [AMB] shi, @i hope that you [AMB] something"; Interviewer: yes")

## Participant : 14

Narrative 1: Cat \& Mouse

## Language of the narrative: No

(Interviewer: you can start; Participant: are you recording now?; Interviewer: yea) et glass, en katt, eh..ost, gulost, mus, ei jente, eh..et kjøkken, eh..en melk, et gal..eh glass, vann glass, glass, ja. Eh ...det er ei jente ho var tørst og ho ville drikke vann eh..ho går til kjøkken eh..ho prøvde å...eh ho fylle uh..fulle her vann eh..men ho så eh ..ser eh...mus og ho var redd så ho roper rop ..jente roper så en katt kommer og katten følger eh...etter mus men muset var veldig fort eh...så mus tar ost...eh...eh da ..da katten eh..følger etter mus det melk eh...dette ned, ferdig.

Narrative 2: Picnic to the park
Language of the narrative: Eng
(Interviewer: you can start) Eh...tree, eh ...rain, ..mountain, eh (participant: the second photo is not so clear to me, is clouds?) ball, car, fish eh ...children og a dog. This is eh ...eh ...this is one day in the summer. One eh ...this ...there is a family decided about they will go to eh ..to the park and they have three children and ....they have a dog eh ..they ...kjøring ..they are riding eh ..their bil eh ..car to the park. Eh...eh ..i ..it's ...it was raining eh...in the road, but eh...after that eh ...that finished raining (giggling). Eh ...there is in the park, tree and the children play are playing with ball there is a park uh ...la "no" sjå ..innsjø ...lake ..there a lake eh...the lake ...eh in the lake eh...the fish eh.. they ..the children playing eh ... with their .. with their dog eh ..through they eh ....they are through they are coming back eh..at home eh they ....see a high mountain eh ..high and nice mountain ..I think it's enough.

# Participant : 15 

Narrative 1: Dog<br>Language of Narrative: Eng

## (interviewer: Tfadal; "you can start")

In this eh...picture I saw the donkey... ei.. ei donk.. Ei donkey.. And ei three ei house, another picture eh.. Is ei man with eh...some fisk in .. in his bag, and he have ballon in the hand. And with.the... the donkey try to .. to go..to get the another animal, yea. (Interviewer: mouse; Participant: mouse, tamak, "ok") and the mouse go out from another side eh...the donkey eh..came in the $t$.. Tree eh ... the man who was there he's saw the situation there and he eh...he.. he came to help the donkey .... And he (interviewer interrupts: dog mou donkey dog, "dog but not donkey, it is dog") dog,.. The dog eh... and he put the fish... fish bag and came .. ja, he.. he put the eh...the... his bag there to came to help and the dog, we saw the dog be happy because he se.. The dog se this bag have some full.. Fish. (participant: tamam hek, "is that ok" giggling). And the man .. the man who wanna help the dog and mouth eh..his ballon go over ... eh..go over three and he tried to get his back and when .. when .. he.. He .. he tried to get the ballon back .. get bag the dog. The ..the dog take his... his food.. Eh..the end .. in the end.. This man get his ballon, but the dog have get all the food.

Narrative 2: Cat

Language of Narrative : Nor
(participant: ballesh?, "should i start?"; Interviewer: yallah, tfadal, ballesh, "yea, ok, you can start")

I det første bildet jeg ser at eh.. Er en katt på stranda .. og jeg ser at det er en tre og katten står ved treet... og det uh..og det er fint vær .. det er sol .... Ja, og det er eh.. Vi ser havet i bildet og fjellet ..... Ja, hm.. Skal vi se andre bilde (Interviewer, ja ja) ja, da i andre bildet ser jeg at .. katten prøver eller det.. Det .. kommer en mann som skal fiske og som har fiskestjern...stein og som har en ball under eh..hende og han mannen har jo blå genser og blå bukse på seg og vi ser at katten prøver ....(shou isma hai elfarashe? "What does farashah mean in norwegian ) eh...vi ser at katten smiler i bilde og.. Mannen kommer eh...mot kale?.. eh..den katten som har lar?....hum..vi ser at mannen mister ballen og at han er..Eh .. nei ..at eh..gså ser vi at katten har jo hoppet over treet og at eh..es.. sitter fast i treet ... og mannen prøver... også,..

Da mannen ser katten eh..trenger hjelp så har mistet han ballen på .. eh..mister han ballen så prøver han å komme mot den katten for å hjelpe . og så han har tre fisk i kurva da mannen slipper ballen så gått ballen i inni vann i havet så prøver han å få tak i ballen .. så ser vi at katten eh..er i fred nå også å ta.. Etter at katten fikk hjelp av mannen .. så ser vi at eh...han har eh...fått tak i ballen og vi ser at eh..han er eh...glad og vi ser bak han at eh..katten som fikk hjelp og vi ser at eh.. den katten prøver å får tak i hans eh..i fisk.. I de fiskene som har i kurva hans.. Og den andre bilde ser jeg at eh...han ha.. Han vet ikke at eh..han har mista de fiskene som han.. Har det i kurve og katten spiser de fiskene som han hadde.

Narrative 3: Cat \& Mouse<br>Language of narrative: Nor

Her vi ser i bilde at ei jente som eh.. Har hatt ost fra kjøkken (interviewer: awal shi min samiyoun, "first, you should say the name of each photo you see"; Participant: na'am?, "what?"; Interviewer: you should call the photo by it's name first"; Participant, "tayeb, "ok, i can do it)

Vi ser av eh.. Vi ser i bilde det er eh..kjøkken og ost og en katt, og et glass og.. Ei.. ei jente og en eh... eh..melk og et glass vann også .. mus .. en mus og.. Sånn vi ser at eh.. Jente eh.. Den.. denne jente har tatt ost fra kjøkkenet og et glass vann og da hun skulle, da hu uh.. Da hun prøvde å he.. Hente melk fra kjøkkenet så hun kom tilbake så var det sånn at katten har tatt den glass vannet ... og da var musen hadde tatt ost ...(Participant: tamam? "is that ok?", Interviewer: khales?, ok "Have you finished, ok").

Narrative 4: Picnic to the park

Language of narrative: Eng
(Interviewer:yallah, tfadal, "you can start")
The last mo.. the last monday i .. i took my children to the park, my children.. My children wanna play football there. And eh.. I wanna set... I wanna sit under eh.. Tree .. eh.. And we sh..and We saw the fish in the park eh.. And i it's was some people there with a... dog eh.. I had the....my rød car and we.. eh.. When we come back to home eh.. At way it was regn and eh.. We drived in the.. Center of city ,.. Our city and it was verybe.. Very.. very high motion (mountain) there ...yes.

# Participant : 16 

Narrative 1: Dog

Language of Narrative: Eng
(Participant: rah eseer khalet ben el enklize wel narwegi, "i am probably going to mix between english and norwegian"; INterviewer, "this kind of mistakes i love and want to deduct")

Eh... in this bil.. Eh..in this picture, it is a mouse and a...dog eh...the dog eh..maybe play with eh..the mouse eh...or eh...maybe ....eh the dog try to catch the mus..mouse. Eh...ek..ekryss about the first picture....now i ....saw.. I saw eh...the dog eh....he..crush in the tree and i saw.. The boy.. Han play with the.. The ballon and eh.. Han is coming eh.. To ..the dog. Eh in..the second picture eh...the ballon eh..now ....is in the tree opp..opp eh..over the eh..the tree and the boy eh..try to eh..Get...eh.. Again....i saw..als..also, eh..The dog is hungry and eh..the dog eh..ss.. Saw to the [AMB] eh.. Cage.. i don't remember what eh...this ting.. Men.. but it eh.. It has eh..food to the eh.. Dog i...uhm. The next eh..picture, also eh..The dog eh..Began to eat eh I.. I think this eh..The mat.. The food eh..Is hot dogs. Maybe eh.. And the boy eh..Han eh..he did opp the..., up the tre eh..the eh.. the tree to.. Hend (hent in Norwegian) The ballon. Eh.. the next eh..picure uh..the boy is happy eh.. Because he ... eh..he has the ballon nå.. now.and the..dog eh..Sit and eh..Eat...eh the food.

Narrative 2: Cat<br>Language of narrative : Nor<br>(tfadali "you can start")

Jeg ser på bidet at vi er ut...eh i naturen og det er en kat eh...som ser på en sommerfly....uh.. De leker kanskj.. De vil leke sammen ved eh..Kys.. kyste... Hvor skal vi nå?.. Neste bilde? (Interviewer: bas tkhalsi, balshi blli baa'da, eh,"when you finish this one, you can start telling what you see in the next one. yes) eh..nå ser jeg at katten prøver å fange ... sommerfly... ja, og det er..no, ja og det er en, ja ok. Jeg ser ikke denne gutten fordi bilde var over det, ja.. Det er en gutt eh.. Han...har med seg.....ja, han vil fiske det ser ut at han vil fiske, eller kanskje han har ...på denne bøtten one eh...fisk. Og da en ball også kanskje han...har med seg. Åi (giggling) ja, det.. nå katten, stakkars katt, han eh..ble hengt itre og det ser ut at han eh..At katten ... har vondt, og.. Gutten eh..Saw he.. saw katten og han kom for å .. han vil prøve hjelpe henne, hjelpe katten, men plustlig (plutselig) eh.. Ballen eh.. Går eh.. Mot sjøen eller mot vannet og han prøver å .. å få den igjen. Nå katten eh.. Ser at eh.. Det er en ferdig mat for henne, han ser på den og kanskje hun vil få litt av fiskene der. Ja.. gutten klarte å .. få ballen igjen, gjennom å bruke den fisketange, ja, men han ..den la ikke merke til at katten få tak på ,..

Fisken. På den andre bilde (giggling), gutten er glad for at han .. ha ballen igjen, men eh... det er ikke noe mat til middag fordi katten har spist alt nesten alt.

## Participant : 17

## Narrative 1: Dog

## Language of narrative: Nor

(Participant: ana jahze, bl narwegi ma?, "i'm ready, in Norwegian right?; Interviewer: yes, tfadali, "yes, you can start"; Participant: okey,... abalesh, "okey, should i start now?; Interviewer: Aha, tfadali, "aha, you can start now")

Jeg ser et bilde uhm.... En ås eh.. Der e det et tre , og .. en liten mus.. Og en hund som merker en muse eh.. Det andre bilde så ser jeg at muse går inn i treet fordi uh... hunden løper etter den, prøver å fange men så går muse i hullet. Jeg ser eh.. I bakgrunnen en mann eller en gutt som holder en... gull ballo.. Ballon og en veske uhm..Han se glad ut og har ... ja, det var det. Ja, jeg ser at musa prøvde å lure hunden der hunden hadde krasja hode med treet.. Og.. også ser jeg at mann hadde mista ballongen og.. Og ser litt sjokkert ut. Eh.. på det andre bilde så ser jeg at ballongen stuck og.. Treet .... Og eh..tenker på hvordan skulle han få tak i den kanskje. Og hunden merker at eh... mannen hadde .. pølser inn? posen . ja, jeg tror det er noe mat inne i posen som hunden merker og ... han får lyst kanskje til å få den. Ja, nå ser jeg at mannen prøver å få tak i ballongen og fjerne den fra treet. Han prøver å klatre opp på treet for å oppnå ballongen mens hunden får tak i pølsene som er i posen til mannen, til gutten. Uh,..og da kan vi se at eh..Han lille gutten blir for glad for å få tak i ballongen eh...men så.. Han kan ikke se at hunden er bak og spiser pølsene han hadde.

Narrative 2: Cat

Language of narrative: Eng
(Participant: do you want me to introduce myself?; Interviewer: la, as ihki ismek ok khalas ana koulto, "no, just sat that your name is(name), ok I have already said it")

My name's Dua'aa eh..I can see in the picture number one eh a cat who's trying to catch a .. butterfly, and the other picture ,....i can see ..eh...that the cat is.. Jumping ..eh..but the butterfly, flying away from it. And there's guy who.. Wants maybe to fish ... that's it. Eh..I can see the .. the cat stuck in the little tree eh..While the cat trying to catch the butterfly, and the guy noticed that eh,..there is a cat and eh..There is a ball felt from the eh,,guy to the sea, and.. At the last picture i can see that the guy is eh..Really sad about the ball but the cat is watching the fish that the guy catched an.. The cat wants to eat these fish, that's it. Uhm.. (Participant: ma baa'ref shou isma hai el sinar? "I do not know what does this sinara "fishstick" mean?" ; Interviewer: ok, ma ba'ather, ihki aya shi, "ok, not a big deal, try to do it in another way") eh..The
guy try to get the ball from the sea and... while he is doing that the fish ate all the fish, the..eh.. Cat ate all the fish (Interviewer: el surah hai, "what about this picture") eh..The guy seems happy eh..Because he got the ball from the sea but he don't know that the cat is back hi..eh.. Back him and eating his fish.

## Participant : 18

Narrative 1: Dog
Language of the narrative: Eng
(Interviewer: you can start) I can see a street and a .. gress, grønn gress. I can see a dog and he looks at the eh..mouse. The mouse want to ...go inside the tree uh...to escape from the dog. Um..in the other picture on the right, I can see a boy with a ballong in his hand um... and also I can see the dog who runs after the mouse who ..the mouse run ja, inside the tree. And then , ja eh..the dog hit his head or it's head um..in the tree and i can see the mouse smiling at him or laughing maybe. Uh..the ballong flew eh..out of the boy's hand. The boy ..ja, eh... and the boy has a food in his hand. He dropped the food and the dog saw it and i think he want to run and eat Uh...while the boy looking at the ..ballong ja. Eh...so the boy jumped to grap the balloon and eh.. and ...ja he could to ..he ..he took it but i can see the dog behind him uh...eating the food that ja.

## Narrative 2: Cat

Language of the narrative: Nor
(Interviewer: you can start ) jeg kan se en eh...green gress også. Også en katt som ser på en sommerfugl og eh..det ser ut som at katten vil hoppe (giggling) på sommerfugl nå kanskje spise det eller få tak i den, ja. Og så ja. Det e første bilde. Eh..på andre bilde ser at katten har allerede hoppet på sommerfuglen, men sommerfuglen kunne fly bort ifra. Eh..ser også en eh... mann eller gutt som vil fiske ser ut sånn. E..han ser på situasjonen eller det som skjer mellom katten og sommerfuglen. Eh..ja, så gutten ser at eh...katten ....ha ..ha ..hangs hangt seg fast på en måte i eh...den liten tre eh...så det ser ut kanskje som at um..han vil hjelpe men samtidig han har mista ballen sin på eh...bakken ..og han har fisk på eh..han har ja. Eh...så gutten har mista ballen sin i eh...opp i vannet, også katten ser på fiskene som gutten har fiska eller som har uh...ja fått. Uh..og det ser sånn ut at eh...ho katten vil gå å spise fiskene mens gutten ikke legger merke til det. Eh...gutten prøver å ...få ballen hans ut fra vannet eh...mens katten har allerede kom bort i fiskene og så skal begynne å spise dem og gutten ser ikke på det som skjer. Eh ja, andre bilde ser jeg [AMB] få ballen sin tilbake, men katten har allerede begynt å spise og vi ser at ho spist allerede en fisk og det er to til. Så ho kanskje skal begynne.

Narrative 3: Cat \& Mouse<br>Language of the narrative: Nor

(Interviewer: You cat start,) ok, det er kopp, tom kopp, eh..en katt, en la "no" ost, mus, jente, kjøkken, eh..melk og kopp med vann. Okei, så um...det var ei jente som var tørst. Ho ville drikke vann, så gikk ho til kjøkkenet, så ...eh...var det melk og ost på eh...i kjøkkenet eh også hadde ho to ...dyr (giggling, Participant: it feels weird) eh..en katt og en mus. Katten ville spise ost men ...e..mus ville spise eh..os mens katten ville drikke melk, så eh..p ...ja så ho gav
dem ost og melk da, og de spiste og drakk, ja. (Participant in Arabic: should i do anything else?)

> Narrative 4: Picnic to the park
> Language of the narrative: Eng
( Interviewer: you can start) so i decided, no.. i can see a tree, colorful fish, rain, colorful ball, eh...children playing mountains, i can see red car and a brown dog. Eh..so i decided to go to a picnic trip or to trip eh..to the lake with my friends and we....eh i ...we took a red car or ja, to the lake and ...in our way we saw mountains, high mountains eh..maybe four of them. Um...and my friend ..one of my friends took her dog to the ..to this trip eh..and it's ..ja we ....we sw...eh when we arrived, we saw a colorful fish ...fish in the lake but suddenly it began to rain eh...so we ran and we tried to um...i forgot...uh ok ..we tried to ....we just went out ...we sat on ..under a tree eh..ja and they decided to go back our home, ja.

## Participant : 19

Narrative 1: Dog

## Language of narrative: Eng

(Interviewer started with some instructions and answered questions by the participants, things he was not sure about)

So in the picture, eh...i can see a green landscape with the eh....several houses, different color on the eh..on the top of eh... oon the top of the picture. And then eh...we can clearly see that um..there is a tree without leaves and eh..a mouse trying to get inside eh..Inside the tree while a dog trying to follow her.. or eh..tracing her.. Tracing the mouse. Eh...but it does not look like serious i think it's look like they are playing together. In the other picture, eh...we can see that.. There is a man passing by with a yellow ballon .. balloon..eh.. in his right hand and eh..The mouse nearly have became.eh..ha.. Have.. has managed to go to be inside the.. The tree and the dog still trying to catch her or play with her. The dog is jumping and the mouse is jumping in in the tree. And then, as a result of this games, we see ah..I can see that the mouse eh.. Managed to get inside eh..the.. tree and she went out from the other side while the dog forgot himself and he.. bumped his head on the tree and it's look like he's eh...it's eh..It was very painful for the dog while the man realizes and just eh..um..eh..Release the balloon because it's not a priority for he..for him and need to try to check the.. The dog and then seems i think the other picture eh...it's very clear like um..the dog is not hurt a lot ..very much bas "but". and then the man realised that he missed his ballon and it's stuck on the tree and he was looking at the .. looking to the balloon and trying to find out how to get it again eh..And we see the he have some stuff like maybe was in shopping so ..the bag on the.. On the
way ...on the way ground here. So, the man trying to get his ballon again so trying to climb the tree and eh... he managed to reach the rope while the dog eh..Using the chance to.. Eat ..or ya, eat the .. attractive food in the bag of the man, which look like sausage and then the man is happy because he get his ballong again while the dog is happy also because he get a very nice food without eh...without the man realizing this eh...ja.

Narrative 2: Cat

Language of narrative: Nor

(Interviewer asks the participant to start. Participant asks to show the first picture)
Katten eh..Tilbringe dagen på stranden eh..På en fin .. fin dag også hun merker..hun.. Hun ser.. Hun så sommerfugl som eh...hun ser sommerfugl også prøver også begynte å tenke å ta denne sommerfugl, også katten komme stille til busken også prøver å hoppe til å fange denne sommerfugl, men sommerfugl klarte å rømme og fly unna. Så sommerfugl klarte å fly unna også ... også katten satt fast i busken som gjør veldig vondt. Også da ser vi en ung mann som hadde vært på fisketur; har fiskestang og ...noen fisk ip.. Ip.. i.. i...han..ja Han har noen han fanget noe fisk han fisket noe fisk. Også han har en ball med seg også kom denne unge mann også hjulpet denne katten mens han hjulpet henne da ballen falt ned i sjøen også.. Han ble opptatt med å.. Sk..me..med å få ballen tilbake så fiskestang ser ut på ..på gulvet også selvfølgelig denne gutten som har fisk blir til synet også katten begynte å tenke dårlig tenking, skal ta denne..skal spise denne fiskene uten at denne unge mann ser henne.. Ser katten.. (Participant: illi baa'da, "next") og så kom en ide til denne ungen til å eh...få tak eh..på ballen i.. i sjøen også han brukte fiskestang til å eh..Å nå denne ballen i sjøen også han klarte ...ogs. .han klarte å få den men.. Vi ser at katten tente på fiske å.. på fiske og på fiske å spise fiske nå har han gjort den og han merker og ..og denne gutten merker ikke at katten spiste fisken.. Hun spist en også fortsetter å spise men gutten har ikke merket tidligere.

## Participant : 20

## Narrative 1: The Dog

Language of the Narrative: En
I see a dog, rat. Rat's standing next to a tree and there is a hole eh.. Beneath the tree. The dog seems eh.. Happy kind of and i see houses eh... behind the tree.. Houses? :) ....when the dog saw the rat he ran after him, and i see a man standing behind them holding balloon and bag wearing shibshib (laughter .... And he asked me if he can move on to the next photo). Eh.. when eh... the dog tried to the dog the dog tried to eh.. Catch the rat.... The dog tried to run after the rat to catch him then the rat went into the hole and eh..... Went from another hole,
then the dog eh... ( the participants sighs and asks "shou ya?ni darab 'what does darab*hit* mean in English) smashed his head to the tree. The rat seemed happy about what happened. Uh.... obviously the man who ... who was standing watching what's going on seems surprised, and the balloon he was holding he...he left it .......(laughter)... he let the balloon he was holding and eh... it's... it's stuck to the tree ...... then the dog saw the bad the man he was that the man was holding and it cont .. contains chicken ....... The dog run .. NOT Chicken uh.. ( what is this? * he asked) ..... Uh... the dog went to grab some chicken the man had.... While the man was trying to grab his balloon of the tree .... Yeah and eh...... the.. The ... the dog managed to open the bag and eat what it contains and the man was able to grab his balloon.

Narrative 2: The Cat
Language of the narrative : NO
Jeg ser en katt med en eh..Lav tre lav tre i natur. I baksiden ser jeg stranda .... En fin stranda egentlig .....den katten prøver å hoppe over den trær til å eh....til .....til å (laghter).. Til å catch butterfly.....eh then , da en mann baksiden ser hva som skjer, han har med seg eh...en ball, en ball med bøtter som er fylt med fisk. Den katten faller ned på trær og har skadet seg selv mens butterflyen begynte å fly bort, den mannen ser hva som ..hva som har skjedd og han så ut eh..overforrasket (overrasket) ...... samtidig han har mistet ballen som han hadde med seg eh..i vannet og han ser trist ut mens katten klarte seg å bevege seg fra treen... fra trær som han falt i $\qquad$ mannen prøver å ta ballen av vannet mens katte, mens katt, ja mens katte reiste seg til bøtten som mannen hadde og prøver å ta fisken fra den bøtte. Mannen klarte å ta ballen av vannet og katten.. og katten.. mens katten fikk tak i bøtte å begynte å spise fisken.

## Participant : 21

Narrative 1: Dog

Language of the narrative: Nor
(Interviewer: tfadali, "you can start")
Den venstre bilde, venstre bilde ser uh...en mus og en hund musen er litt redd og hunden ser på den musen. På den høyre bilde eh..musen allerede har eh...hjemmet seg og hunden går etter den musen også vi ser uhm...en gutt.. En gutt som har eh..en gull en ballong også har noe mer i hånda men ser ikke ordentlig, ja. Det er sommer dag tror jeg, ja. Ja, på den venstre jeg ser uhm..At musen har ramme av hunde og hunden har slått seg på... hodet eh.. Gjennom treet og ballongen har også eh..gikk fra den gutten ja. På den venst.. På den høyre, jeg ser at eh..Hund .. hunden.. . ser på .. på gutten som leter etter ballongen som er stuck i treet ..på tr..trær..trær
ja. Her gutten på venstre bilde prøver å... få tak på ballongen ....ja, og den som vært med gutten jeg tror det er uhm..Pølse kanskje. Hunden har eh..E.. prøver å få tak også. På den høyre, jeg ser at hu..eh gutten ..har um..Eh.. tatt ballongen.. Og hunden spise den pølse mens gutten ser ikke det.

## Narrative 2: Cat

## Language of the narrative: Eng

(Interviewer: you can start; Participant: you want me to talk about the picture; Interviewer: yes, in english and this is the first one; Participant: the one on the left?; Interviewer, aha, yes)

I see ..a cat, which eh...standing and um..ehm..ja, watch a butterfly, uh..Maybe or it t..try to catch it and $i$ see the sea eh..The mountains and eh..it's eh...it's a summer day $i$ believe and eh..Ja, the picture on the right, there is a boy who will fishing and eh..The cat try.. Try to catch the butterfly and jumping opp over uh..the t.. The small tree. Shou "what" also we can see uhm..the see and the uhm...the mountain. My english is very weak (interviewer: it's ok, it's ok, just continue) ja..Eh ja. Here i see that eh,,uh..The boy walking and had fished uh...many of fis.. Fish and the cat is um..have problem .. has a problem and could not um..And stuck on the tree. In the nother one i see that eh..The boy try to catch the ball which is in the sea and the.. Cat eh..look like it wil eh.. Eat the fi.. The fish, ja. That's it. Ja, the first one i see that the boy trying ... to catch the ball. Third one, and eh..Cat already eh..took eh..the fish and the right one i see that the eh..boy already også had eh..the ball and the cat eats um...all the fish.

Narrative 3: Cat \& Mouse
Language of the narrative: No
Interviewer: tfadali, "you can start")
Eh...glass, tomt glass, eh..katt, ost, jente, mus, melk, vann, også kjøkkenet. Ja, um..Det var en gang en jente som ville spise frokost, også hun ville spise ost og melk, eh..Når hun ville spise ost hun fant ikke det også samtidig så hun eh..Hun.. hun så hun eh en mus som har spist allerede osten . og så så hun sa ja, jeg skal.. Jeg skal eh..spise .. jeg skal bare drikke melk. Hun.. letet etter melken i kjøleskapet, men hun også fant ikke det, så hun samtidig også eh..Så en katt som har spist.. Som har drakk alle melkene, melken så hun sa ja, nå jeg skal bare fulle opp eh..den tomt glassen med ..glassen med eh..Vann og så hun [AMB] og ferdig.

## Narrative 4: picnic to the park

## Language of the narrative: Eng

I see tre . ball, kids, fish eh..Dog, car and mountains, and the rain maybe. Ja uhm...hva kan vi say her? In a summer day, eh..there eh..the..it was um..Veldig ..uh.. Veldig..very beautiful day eh..And the kids uhm...play.. Playing together and had eh..eh etter..enjoyed. There was eh..um..a red car .. , which eh..There was a red car which eh..Um..suddenly came and... and skulle krasje en dog because the dog was.. After the ball and the.. The car stop.. Eh..i midt.. På midten av veien, mener jeg and um..the dog ... fortsetter etter the ball, so the ball ...uhm.. Stop eh.. Between the kids and eh..The tree. so the kids trying take the ball og gi den til dogen, ja, just like that.

## Participant : 22

## Narrative 1: The Dog

Language of the Narrative: En

My name is (participant's name). I am gonna talk about eh..This picture or this story so we can see in the picture a dog eh running after the mu.. Mouse in and the house eh... and the mouse hiding himself in the tree, and... and we can see houses in the back and little street. so In the next picture eh..he hold a balloon i think the dogs belong to this eh,,, to this boy eh.. Yes, the next picture third one eh..The dog hid his head in the tree and the boy missed his balloon and this is stuck in the tree and.. and the boy eh..He has eh...a bag .. hotdogs and the boy comes to the tree to take his ballon and the dog see the bad with hotdogs and he ran to take hotdogs and eaten them .. that and the boy take his balloon from the tree and yes this is the story.

## Narrative 2: Cat

Language of the narrative: No
(tfadal, ya (name), "you can start(name)")
eh... jeg ser en katt som ser en.. Sommerfugl and eh..katt og sommerfugl .. de i..i stranda eller ..ja..[AMB] av stranda også her, nest.. På neste bilde ser vi at katten føller.. Følger sommerfugl og da kommer en gutt med en fiskestang og ball og ha en.. Har liten fisk. Neste, også ser vi at katten bli.. Eller blir falt i inn tre også ser vi at gutten blir litt sjokkert og han mistet ballen sitt i... vannet også ser vi at eh..Bal..eh gutten eh..vil eller vil ta ballen fra vannet eller fra havet også ser da katten ser en fisk inn i inni .......ja, ser .. ser fisken til gutten ja, neste. Også der .. gutten brukte fiskestang for å ta ballen, mens katten gikk og spist..e fisken um..ja, ja ferdig

## Participant : 23

Narrative: Dog<br>Language of the narrative : Eng

(The participant asked about which language he should use to tell the story, Interviewer answers:English, the participant ask which photo he should start wit, the one on the left or the one on the write. Interviewer asks him to start with the left one)

In this first picture, to the left side, I can see eh..Dog and mouse eh...I don't know if they playing together or the dog try to eh..To hunter eh...the mouse in the.. In the another side of the picture i can see the mouse eh...try to hide .. to hide herself in the tree and the dog try to follow them. Yes, eh...in this picture i can see uh...eh..The dog couldn't eh..come inside in the same hole... eh..This mouse eh..uhm..Waiting and i can see this boy who is eh... who is stand there and eh..Look at them and he missed eh.. Eh..the balloon um...and seems eh..So surprised . eh...In the other picture, i can see this trouble.. All this problem that eh.. Eh...the ballong who.. Is hang on the tree, high in the tree, on the tree and the boy couldn't reach it. Eh...yes. Yes, also i can see eh..This eh..Um..bucket..or eh...eh..this boy had with him. Maybe there is food inside it and I can see the dog sitting to side and eh..Try to watch.. Eh..ja.. Watching the food inside the little bucket and eh..They haven't dropped eh...yes, i don't know what can i si about this (giggling). ok, uhm...So in this picture i can see eh...the boy eh...can reach the ballon now eh..by help eh..Yes, he putting .. the foot on the tree and try to reach the ballon eh..and the same time when he's busy with this i see the dog .eh...try to eh.try to get some food from eh...the bucket um... and in the other side, i see.. Everyone is happy now. The boy eh..Got the ballong and the dog got the ..food maybe he.. Maybe the boy will be surprised after that, when he discover he's got the ballon but he missed the food.

## Narrative 2: Cat

## Language of the narrative: Nor

(interviewer: you can start. Participant: is this the first picture now?; Interviewer: yes, then the participant starts to tell the story in English and I had to stop him. The, i asked the participant to tell the story in Norwegian)

Ok, ja, kanskje mye enklere å snakke på norsk. Da ser jeg på...på bildet til eh..venstre, ser jeg en fin katt som står veldig klar til å ...eh..til å angripe kanskje en eh...ja er ikke helt sikkert, er det fugl eller.. Er ikke helt sikkert,...som står på ..en plante og da kan jeg se det er fin eh..fin utsikt her ved kysten, og vil jeg tro at det er jo kanskje sommer fordi jeg ser noen blomster i ..
i tre kanskje eller plante. Åh, ja, det e som sagt, det e fin utsikt ved kysten og...høye fjell i bilde her. Ja, og til høyre side, så ser jeg at um..mens den katten prøvde å.. Ja det vakke fugl, det var jo eh...sommerfugl, ja da ser jeg at katten eh...prøvde å..å angripe den smugefulla? Og plutselig så kommer en gutt, en gutt med.....som er klar til å fiske eller kanskje han allerede fisket fordi jeg ser noen fisk i ...i bøtte og eh..Fiskestang i hånda, og holder også med en rød ball. Ja, i den andre bilde no så ser jeg at eh...den katten mislykket med ...å..å fange summerfugla og eh..o $g$ ser her at gutten er som overraska eller tenkte å synde på den katten og så mista ballen og ...ser som veldig eh...ja.. veldig sånn bekymra .. ser veldig bekymra ut ..om katten som kanskje skadet seg. På....på det andre bilde så ser jeg at eh...ja det var sånn eh.. Litt luring her fordi han eh..gutten mista ballen i eh...i sjøen og var sånn veldig opptatt hvordan s.. kommer han til å hente eller få denne igjen, mens katten eh...ja ser som ut veldig eh...veldig interessert i bøtte som er fullt av eh...fisker. Ja, og her i bilde til venstre så vi at gutten har eh...brukte hode ved å bruke fiskestangen til å... å dra ballen mot han og han er som veldig fornøyd og opptatt av ballen og han glemte fiskene som den katten var veldig glad til å ..å få dem til eh...til middagen kanskje ..ja, og den.. Det bilde til høyre nå så ser jeg at han var som veldig fornøyd og stolt av seg da han fikk ballen eh..I hånda og ser jeg jo at eh..Den katten var jo kanskje mer fornøyd enn han og ser jo eh..Ganske met ut da han.. Da katten fikk nok mat idag.

Narrative 3: Cat \& Mouse
Language of the narrative: Eng
(interviewer: tfadal, "you can start")
Ok, this is eh..Many pictures here; the first one eh..This is glass eh..The second one eh..cat, cheese, mouse, little girl, kitchen, um...milk, milk eh..box, and glass of eh..Maybe water or something with springing?.eh..Gas or like that. Yes, eh..In this picture i can ..i can image eh..yes, i can think there is eh..good and very nice kitchen which is full with a lot of eh..Different food eh...I can see eh..Bread and some fruits, and maybe cheese, and milk. Eh...at the same time maybe this ...eh..Maybe eh..there is some animals like eh..like a mouse which is eh..interesting maybe to eh..To get some food maybe some cheese in this kitchen eh...but the same times eh..but the same time i can s.. Maybe this family who's have eh..This kitchen ha eh..uh.. Has eh...a little cat uh..to .. maybe try to eh..To hand this mouse and give eh..And after that, eh..this little cat maybe give eh...maybe eh....maybe be get some milk as a... as a... um...gift or eh..Award.. For this effort to eh..to catch or hen...unt this mouse um...ja, maybe eh.. (giggling) and i can see this cat eh..Or this little girl maybe it's very very eh..very happy to have eh..This little kitty eh...ja.. Not anymore.

Language of the narrative: Nor
Okei, um...vi har bestemt oss å gå.... På tur eller picnic eh..Og vi tenkte å ta med barna så vi har eh..forberedet oss og satt alt som vi trenger i bilen i denne fin rød bilen her eh...den fine rød bilen her eh...og vi tatt med oss eh...eh..Vår eh..Fin hund så vi reiste på en tur over fjellet og vi har kommet til .....ja til skogen kanskje eh..og den skogen var så fin at den var jo på..den var jo ved kysten. Noen som eh..hadde lyst ..å fiske mens andre .... Ja, mens barna kanskje ...eh...lekte litt og....lekte litt med sånn noen leker eh...noen andre holdte på å spille fotball og plutselig så eh..kom det regnet. det ble sånn litt dårlig vær og kom regnet, men det var ikke noe f.. Det var ikke noe for å ødelegge vår fin tur, så vi koste oss uansett.

## Participant: 24

Narrative 1: Dog
Language of the narrative : Eng
(interviewer: your name is...., right?)

Eh..about this bilde ...... it's house (Interviewer asks the participant to fix the sound, because he could not hear the participants well due to some technical problem.) I'm seeing a dog is running after the mouse, maybe $\ldots$ he wants to eat it. The mouse is running to its house, it is under the tre, eh..It is also a tre, a road, i'm seeing også back the photo, the house ......uhm...just this,... i have to go to another bil..photo,ok. Ok the mouse is trying to hide in his house og.. The dog cannot catch him. Eh..back eh..the photo, there is a boy. He has balloon and he wants to eh..Eller.. Or uhm....above the tre, maybe .. have to go to another bilde or i have to speak more (interviewer: answers: you can speak more) some i had for the first bilde , there is also a house back the photo a nature, road the boy has eh...i cannot say so much a bag in his eh..hand i think it is mouse? I cannot si so much, ok i will just si this [AMB]. ok, i will go to another bilde, which one?, ok, eh...the boy is trying to catch the ballon, he is climbing the tre, and he lift? his back, his bag eh..away, so dog is running and he open it and try to se what is in . i think it is eh..pølse på norsk "sausages in Norwegian" (giggling),ja, so, after he has i can see he has catch the ballon, he has mistet his bag, so i'm think the dog is eh...lucky ..somehow.. ok,I have to speak more or i have to go to another bilde (Interviewer: no, this is enough).

## Narrative 2: Cat

Language of the narrative: Nor
(Interviewer asks the participant to start, the participants needed a second before she start to magnify the photo on her screen)

Eh..jeg ete.. I dette bilde jeg se en katt, en sommerfugl ... det er en gul sommerfugl ...og.. Jeg se også... haven.....eh denne katten eh...bare ser på sommerful .. kanskje han tenker på noe, spise eller ...noe likne.... Det ser [AMB] eh...vår. Kanskje, fordi det er eh...grønn, ja. Bare sånn. Det er sommerful, også når vi ser sommerful det betyr det er vår. Ja, kan se på annen bilde?. På annen bilde vi ser her at ...hvilke bildet.. Denne ok. Eh...det ser her at eh..Når vi ser på denne bilde ... vi tenkte at denne katten på forrige bilde tenkte på å hoppe eller spiser sommerful og nå etter den har hoppet prøvde å spise sommerfugl så sommerful begynte å fly og gå bort, men bak katten vi ser en mann kanskje han eh..Eh..vi vil sier ... han eh..Fisker fiska..ja, han har fisk og en rød ball . han har sjokket hva har han sett ....av eller hva har sj.. Hva har ...skjedd med de ....ja. Bare sånn. Jeg har ikke noe mer å snakke. (interviewer: andre bilde, "the second picture; participant: bare sånn, "just like that"; interviewer: mahal ma a'm ashirlek, "just where i am showing you"; participant: because i have made zoom). det ser ut at eh...rød ballen blir i havet i vannet så.. Gutten ser etter og prøvde kanskje å ta ballen ut. Det før han legga ...fisken eh...bak og..ikke tenke på, men plutselig etter katten ser på fisk og ser at det er en sjans å spise etter at han eh...var ulykka å spise sommerful plutselig han sier at det er en ball med fisk så han ser ut veldig glad og kjenner munnen etter han har sett fisken, ja bare sånn eller.. Hvilket bilde... oi .. etter at gutten har prøvd å ta ballen fra vannet, så.. Katten begynte å ta fisken og begynte å spise. Han ser veldig glad ut .......(interviewer: have you finished?) etter.. Etter han har tatt ballen han er veldig glad men han har mistet noe annet eh..Han har mistet fisken sin og det ser ut at eh... .katten har spiste nesten alt ja, bare sånn.

## Participant : 25

Narrative1: Dog

Language of the narrative: En
(i asked the participant to start, and she asked if she has to do the narrative in English, I answered, yes) i see a dog that seeing a.. A rat uhm..And hus from far away and second picture i see the rat going into the tree eh..And the dog running uhm...back and uhm...eh..I see the man who hold a.. A balloon and bag eh..Coming [AMB] the street who is coming from that house that is far.....ah, yes ..(click sound). Eh..then i see her that the dog eh..Has uhm...eh..Has.. hurt his head and eh...when boy see that, he..Eh.. the balloon has far away
and.. Uhm..he was shocked and eh...in the second picture i see that eh..The balloon has been in the tree eh...and the dog .. and the boy .. has left that bag in the ground ...eh..And i see the dog seeing at the bag because maybe it eh..There is in it eh..A hot dog maybe or sausage yes. (click sound) eh..Now the boy he tries to get the balloon eh..And the dog trying to get the hot dog or sausage from the bag and in the second picture i see that the boy eh...eh...succeed to eh hold the balloon and eh.. The dog also succeed to eat the sausage.

## Narrative2: cat

Language of the narrative: No
(I asked the candidate to start) jeg ser en katt som ser på sommerfugl som er på stranda eh...oh he..På andre jeg ser en gutt som kommer til å fisker ogs.. Også når han kommer eh..den katten har prøvd å hoppe til å .. til å ta sommerfugl. og gutten har ser at katten har falt i eh.. I lille tre og sommerfugl har gikk og... og... ballen har tatt ned .... Eh.. uhm..Oh ballen har tatt ned i havet og han ser på.. på det, og katten har sett uhm..Fisk.. fisken i .. og katten har sett fisken (click sound). Eh..gutten prøve til å ta ballen med hook og... og katten prøver til å ta fisken eh...gutten har eh..Har tatt ball og.. Og katten har spist fisk.

Narrative 3: Cat \& Mouse
Language of the narrative: Eng
(i asked the participant to start) i see eh..Empty glass eh..I see a cat, I see cheese, I see a rat, I see a girl, I see kitchen, I see melk, I see glass of water. (me: ok) uhm..One day i.. I was going eh.I was going to the kitchen to make a glass of water eh...then, i... I see en.. En ..i see in the golv (i presume she wanted to say the norwegian word gulve) eh...a cat.. Eh ..a rat who is eating a cheese and eh....My cat has run after him and when she come back i pour her a glass of wat.. Melk.. not a glass.. Uhm...melk eh...when she was running, she has broken a glass (i said Bravo), that's it.

Narrative 4:Picnic to the park
Language of the narrative: No
(I asked the participant to start) eh..Ein gang vi har eh...jeg skal gå ut (i stopped the participant and reminded her to mention each photos she sees one by one) jeg ser en tre, jeg ser en fisk og regn og ball og barn og fjell og bil og hund, en gang jeg har gikk en tur med min eh.f..familie eh..Jeg har to søsken og ... når vi skal gikk ut tur til fjell og.. Når vi med våres rød bil når vi gikk til fjell uhm...vil ..vi ska.. Vi skal gikk ikkje til fjell vi skal til en eh....En lekeparken som er nær med eh..Nær fjell eh...og når vi gikk til lekeparken vi har spilt med ball også i.. Nær fra [AMB] også vi ser en dame som kommer med ... med søt hund
og ... jeg har tatt bilde med han også når jeg eh..Nær av uhm...lekeparken det var et havet når vi gikk med bilen til havet stranda vi ser fisk farge fisk som var så fint eh..Også når vi kommer tilbake når jeg satt i Bil det var regn eh...og masse fjell som jeg ser på, det var veldig fin vær.

## Participant : 26

Narrative 1: Dog

## Language of narrative : Nor

Jeg ser på dette bilde eh..It's mo...mus um en hund, også en eh..tre. Eh...denne muset har små hos..eh.. Hus i tre eh..Hunden prøver å ...å.. Catche muset for å spise.. Få å spise det. Også eh..e.. en gutt som har gul ballong um...spaserer rundt. Um...da gutten sa at eh..at hunden prøver for å.. å catche denne eh...muset han .eh..Var shocked og ballongen hennes eh..flew eh..eh..Fra hans eh..hand eh...ballongen eh..Nå e på tre eh...gutten prøver å ta eh..Å ta ballongen av tre mens hunden går å får å spise ka eh..Gutten hadde i um. Eh..posen sin. Nå um..Denne gutt eh..Fått hans ballong tilbake mens hunden ser ut veldig ...glad at han spiser også eh..Ka gutten hadde i eh..Posen sin.

## Narrative 2: Cat

## Language of the narrative: Eng

I see in this picture cat and eh...a small tree and a butterfly. Eh...the cat trying to catch the b.. The yellow be.. Butter fly and now the young guy coming eh..and he has a ...a fish stick, red ball and some fish in that basket. Now .. the um...the cat couldn't eh..Acth the butterfly. The butterfly flew away. The.. young guy get chock and he eh..looks very eh...strange (giggling) and he eh...he get the b.. The ball get um..Away from him. And now the .. the red ball eh..in the .. get in the see and he look sad because he missed his ball. the butterfly...the..the cat looking forward t... the..fish basket. Now the..um.. the guy trying to to catch the.. the ball by the fish stick eh...well (while) the eh..the cat eh going eh..to catch the eh...fish from the yellow basket. Now they..eh..The guy is really happy because he get his eh..ball back and eh..The fish ..the cat is really happy also because she get the eh..some food and she already eat all..eh..all fishes.

# Participant : 27 

Narrative1: Dog
Language of the narrative: Eng
(Interviewer: try to speak a little bit high)
Should i talk.. Should i talk with [AMB] ok, so i see a dog and a mouse. The mouse eh..Trying to eat something or find something and the dog see him so he try to catch him and the mouse eh..just run under the tree. ...should i say something else (interviewer: just continue) ok, so the dog kicked his head in the tree and eh..There where.. We're seeing a boy he's coming, where there hot dog maybe and a ballon ..hmm..that flown in the air, or he just missed the ballon eh..the dog see the bag with hot dog he just eh..Get right there [AMB] and the boy trying to get the ballon on the tree, or from the tree. Yea, here we go, so there m.. i see the boy get the ballon and then the dog get the.. hot dogs (the participant whispered something here) delicious.

Narrative 2: Cat
Language of the narrative : Nor
(Interviewer: You can start)
Um..det ser jo sånn en dal.. Også det e en sjø. Der ser en ...en katt som ser på en fly ..sommerf.. Sommerfugl og så hoppa katten til å fange det sommerfuglen da også det e kanskje en mann, jeg ser ikkje akkurat nå, jo. eh..Også det e en gutt som har med seg en ball og en bokse med... Fisk og , ja. Han seie på det. Han ble overrasket eh..når katten falt eh...også mistet han ballen så gikk han etter det og han skulle jo hente det tror ej og da h.. Eh..vil.. Nei da.. Da la katten merke til eh..Fiskene .. som hadde lyst på .. har lyst på.... eh..Gutten skulle hente ballen mens katten gikk og e.. Tatt over fiskene av de...der.. glemte ka e det der eh..å spise dem mens vo.. Mens gutten fikk ti.. Fikk det til å hente ba.. Å hente ballen ja.

## Participant : 28

Narrative 1: Dog

Language of the narrative : Nor
(Interviewer: you can start, Norsk) eh...Norsk, det er fin dag eh..En hund i can see (giggling) eg kan se hund og mus. Hunden var på tur eh..plutselig hunden så eh..Eh...ein mus, men musen, vent litt (Participant: stop the recording, stop the recording, I am making mistakes, i am mixing the narrative with English. Interviewer: it's alright, such kind of mistakes would
reach my research. Please keep talking. Participants: Okay) alright, hunden sa, mh..Mus eh..The mus, the mouse (giggling) men eh..Musen eh ble så redd og prøver å gjemme seg inn i et tre, okay. Eh......jeg kan gå videre ha?. Hunden prøvde å ta musen men eh..Klarte ikkje fordi musen så.. Løpt så fort $\mathrm{og} \mathrm{p} . . \mathrm{og}$ hunden klarte ikke den ... hunden.. Eg tror hunden var med tur med .. med en gutt de gikk på tur. Gutten han har ballong så han røpe på hunden men eh..(Participant: Sam, the photo is not quite clear) skal jeg fortsette, ja, ok. Eh..den gutten hadde med en ballong men han mista ballong. Det blåste og så ballongen eh..Flydd opp på tre på et tre. Gutten prøvde å ta ballongen. Også hunden sitter og tenke på musen og hu..gutten han ha...han var .. han har ei pose med..(Participant in Arabic: let me magnify the picture) ei pose med ...pølse eller frukt, uhm, eg vet ikkje hva har han i posen, har du med et bilde? (Interviewer, ja. Bare forsett) eh...ha ( Participant in Arabic gave some compliments) hunden klarte ikkje å ta musen. Også musen looked og gikk eh..M... puff Ut av trær, det andre vei eg vet ikkje hva er det. , men Sam .. jeg har fått tredje bilde før .. fjerde bilde før tredje bilde. Det er greit, du e jo bare å fortsatt. Okay men er det mer bilde?. Vet du ka ? det var bedre hvis du viste alle bildene sammen. Aha..ok.. Ha..okay denne gutten han var på handletur. Han kjøpte pølse og han var på vei hjeme.. Hjem. også plutselig det blåste og han mista ballongen så si...eh..Siden gutten han ta ballongen og hunden fant pose med pølse og sitte og spise pølse og han var veldig glad fordi var skuffet på grunn han klarte ikkje å.. Å ta musen men han til slut, han bli veldig glad fordi han spiste opp alle pølsene.

## Narrative 2: Cat

Language of the narrative: Eng
(interviewer: you can start; Participant: can i start with the first picture ?; Interviewer: yes, the one on the left; Participant: should i say hi or not?, Interviewer: no,no)

Ok, there is a cat ..ah..On the picture. The cat on the.. By the seaside. The cat is trying to catch I think a butterfly,... yellow butterfly. Um..what can i say more?. (In ARABIC: what else), english, only English now. And the um...eh..there.eh.. it's a very nice day. Um..i think it's summer and um..The sea it's so ....blue, no waves (giggling) um.. What can i say more?.. I cannot say more. Okay, there is a boy. He's coming eh...he uh..I can see in the picture boy eh..I think the boy is trying to fish..uh...and eh... there is a ball, a red ball and the cat get scared from the boy and trying to hide herself i think so...eh the boy is around ten years old. And the butterfly ... she run away eller ... fly ..... This is what i get [Amb] . (interviewer: the one on the right, I am putting the indicator on it) uhm... something happened, the ball eh...the ball in the sea and the boy $i$ th.. he try to catch the ball and $i$ think he's scared to go in the water ... and i can see in the bucket, there are tree fishes and eh..The cat she's very excited she's trying maybe to ge.. To reach the fish. She want to get the fish ... and the boy is busy with eh...the ball and the cat eh..Is busy to..to catch the fish. This what can i see in the picture. Uhm...the boy is very happy he feel success because he get the ball, but on the other way... On the other side eh..The fi..eh .. the cat is also very happy because she reach the package and she get what she wants and she's eating... and she's eating the fish.

## Narrative 3: Cat \& mouse

## Language of the narrative: Eng

Ja, okay . eh..Thers is a little girl .. she want to eat her dinner because i can see in the kitchen brea,.. Bread and eh..Fruit so she was trying to make slice of bread, she wanted to eat the cheese suddenly a mouse came and stole the cheese. And she tried to run after the mouse, but she drop her..The milk, the milk fell down ...the cat come eh...um...to catch the mouse and eh..but the ...she couldn't. Okay?

Narrative 4: Picnic to the park
Language of the narrative: Nor
(Participant: should i start?; Interviewer: yes, you can start now)
Um.. jeg kan se et tre, det er nedbør, også f.. Fire fjell, ball, en ball, en eh..Rød bil også fisk eh..tre barn, hund. Så eg tror det er eh...eh..barna på leikeplass. de leiker, de .. de koser seg uhm...men det regner masse også det er vinteren fordi...jeg kan se ..jeg kan se for eksempel eh..snow på gjellet, men samtidig ..sammentidig eh..Tre er grønn. De tr..uh..de dra med ..med bilen til leikeplass. De har med eh...en ..en hund.. Brunn hund ...um..Jeg kan se det er fisk en fisk hm.. Hva ska vi gøre med fisken her (giggling) den historien. Fisken er ....jeg tror det er nok fordi barna de på.. De er på leikeplass . de har en hund også de kanskje de leike seinere de s.. De vil spille fo.. Med football seinere h..de drar til leike plasse i bilen og de har med en hund men det regner masse eh..Også det er kaldt vær fordi det er snow der jeg tror jeg er ferdig Sam.

## Participant: 29

## Narrative 1: Dog

## Language of the narrative: Eng

(Interviewer: you can start, English) Eh.. .i see ......( Interviewer: Hello)... tree, a dog (Participant: do you here me? Is the my voice is clear; Interviewer: yes) ok, i see the tree, and eh..It's the dog um...and the mouse ..... They run eh..in eh.In the second picture, eh..It's a boy um...(giggling) that's it.. (Interviewer: what do they do, the mouse and the dog?) they run , yes and eh..The mouse run eh..To the.. Hid..hiding, yes eh..Ma.. ok in..in the sec.. Eh...i..in the second picture, i uh..Ser ( giggling), hva betyr ser på engelsk?. I saw.. I saw eh.. The dog ha.. Has.. crash.. Crashed med.. In the tree and The mouse eh...left and the..the boy
... shocked and the ballong luft..eh.. Luft opp in the ...high and this andre picture the le.. The.. right .. the picture of the right side i saw eh..That The ballong cashed? opp cashed in the tree eh.. It's vans..it's difficult to the boy.....to .. to.. To. to casht (catch) it.. To cash it... and [AMB] see the.. The dog eh...the do..it's hungry and eh..he want to eat ja. yes. Um..yes the boy ha.. Har eh...um...he want to get up the balloon and the dog eh...ran to the ... to the.. To ate and the.. This begin to ate eh...to ate [AMB]. eh..The. in the picture the right side, the..boy get it the ballong and the he.. He is happy and the dog began to ate.. He's eh...eating his ate .. his food.

## Narrative 2: Cat

## Language of the narrative: Nor

(interviewer: you can start) ok, eh..Jeg ser havet og det er en katt som ligger i starnda. Eh..det høyre.. høyre bilde, også katten ser på en eh..Busk eh..og det er en.. Som Ensikt (insekt) opp på .. busken eller treet. Været eh ser som det er sommer ....og det er på andre side, dei snakka på andra bilde nå, ja ok. På andre bilde som er på høyre side, det.. Det kommer en..eh det er samme bilde katten eh..prøver og eh..fange opp den insekten eh..Den insekten eh fly på ...på f..fly opp eh...også det er en gutt som eh..Har på seg en blå ..eh..genser også ser ut som at han eh...kommer for å fiske....eh han har eh..brunn hår og han bærer en eh...fiskesteng.... Eh..det på andre bilde, eh...gutter ser som at han er overrasket eh..katten eh..krasjet i ...treet også han ser på katten han ble eh...sånn .. det er en ball som falt av han. På andre bilde til høyre ballen falt i vannet eller i havet også katten ser eh...på bøtten som er.. Som er inne det er fisk og katten ser ut at hun ville spise den fiske... fisker ja. Ja, Her tredje bilde det er en,,gutten som prøver å eh..ta ut av vannet den ball..ballen som falt inn og katten gikk til å spise fisk, eh..Katten eh..styrre på bøtten og ville spise fisk. På andre bilde til høyre eh..Gutten har eh...fikk... fikk ballen og han er glad for det han ser ut at han er glad eh..men katten eh..Er ..bak han og han ser ikke at katten s.. Har spist eller spiser eh..Hans fisker som han har allerede fisket.

## Participant : 30

Narrative 1: Dog
Language of the narrative: Nor
(interviewer: you can start . Participant: the photo on the left?; Interviewer: yes, i will use the indicator to show where you should start)

Eh....det er eh..jeg tror det er eh..i landet. Det er en hund som eh..Som ser litt mus. Han prøve å hoppe over henne for å ...for å holde henne, men eh...ho i andre bilde hun eh..ho musen eh..eh..Musen eh..Gå bort under tre og prøve å eh...forsvare bort ja, nest. Ja, han prøve..han hunden prøve å ...å uh..hol..holde mus men eh...hunden eh..straffe....straffer tre i hode og eh...og komme inn gutt som har eh..En ballon. Ballon eh...flytte ut.. Fly ut.. eller fly...fly bort.

Eh....gutten prøve ..han ser ..ser til... til ballon og prøve han vil prøve å ta ballon igjen. Hunden sa ..sa en pose som hol.. Som eh..Som var med ....med gutt eh..Ha eh..Jeg tror at han eh..at hunden vil ...vil spise det, next. Ja, til slutt gutten eh..ta ballon fra tre og eh...hunden spise eg tror det er pølser hunden uh...spise pølse og ... alle var glad.

## Narrative 2: Cat

Language of the Narrative: En

This is sea that is sand, cat og cat se butterfly eh..In the tree, butterfly are in the tree. eh..Han andre, andre?, annen, annen?.... Eh...another.. Another picture cat eh...it was.. It has in the picture a boy with eh...with ball and eh...he has fish som fish it and the cat hopping in the butterfly . yeah.. Next eh..The cat eh...kom in eh...in the tree it was eh...the .. the boy and the boy run eh..To the.. To the cat eh...next picture.. The eh..The boy missed eh...the ball and the cat eh..eh..s... seh.. Se the fish. Next the cat ..eh...eat eh....begin å eat fish and the boy provd ..eh..prov eh...å catche eh...the ball with fishing ("i do not know what is the name for this" The participant said in arabic) eh..Next the .. the cat finish it også to eat eh...to eat fish and the boy or the bo eh... and the boy has ball, yes :) (the participant smiled and called his narrative embarrassingly as rubbish)

## Participant : 31

Narrative 1: Dog

Language of the narrative: Nor
(you can start) så til venstre siden um...jeg ser flere hus en hund og en mus eh..Mus skal gå inne tre og hunden har lyst å ... leke med denne mus ... til høyre siden, eh....hunden løper etter musa, musen går inni tre for å gjemme seg samme tid det er en gutt som holder balloon og han går på.. Skal på piknik eller kom fra en shopping, er ikke sikkert. Okei, til venstre side uh da hunden hoppet etter musa så han krasjet med eh...denne tre og mus se på han og ler eh..Samtidig gutten mistet ballongen og ballongen nå uh..fl..som flying out, ikke så viktig. Til høyre uh...okei eh..denne ballongen henger fast på tre og gutten tenker hvordan han skal får den tilbake, så han... legget ned den eh....shopping tror den halder (inneholder) mat eller noe og hunden ser på denne posa og ska.. Tenker kanskje å spise den. Eh..venstre uh.. Gutten kunne å få tilbake ballongen og han ser glad eh...i tillegg hunden også kom nærmere..nærmere seg til po..til shopping og begynte å ta ut den pølse fra... sekken. Høyre siden begge er glad gutten fikk tilbake ballongen og smiler, og hunden slikt i pølsene og begynte å spise og de to er glad.

## Language of narrative: Eng

(interviewer: you can start; Participant: English or Norwegian; Interviewer, we kan start with English) so eh..the picture to the left it's a cat in the nature next to the beach or a lake a...nd seeing a butterfly so getting interested and the one to the right, the cat is jumping after the butterfly, playing with it and there is a guy coming for picnic next to the lake or no.. he was fishing and he just got quite a lot of fish. Okay, eh...so the cat to the left eh...jump into the..the bush that was full of needles i do not know the na..the word of it. So it got hurted and when the guy saw this he got panicked and he... he might be willing to help the cat. To the right the cat saw the fish and the guy lost his ball in the water so she might be taking the fish while he's busy. To the left, uh..The guy managed to get the ball back from the water mean.. Meanwhile, the cat stole his fish from the bucket. To the right he was happy eh..Getting back his ball while the cat is happy enjoying her meal.

## Narrative 3: Cat \& Mouse

## Language of the narrative: Eng

(Interviewer: you can start) Cheese, cat, empty glass, mouse, girl, kitchen, melk uh..Glass full of water. Okay, story. Um..the girl in the kitchen ... trying to fi...eh..want to drink a glass of water and she saw the cat walking around so she took out the box of melk and she was trying to fill the empty glass and to give to the cat.., but it will be hard for the cat to drink from a glass of water a... at the same time the girl dropped a piece of.. A slice of cheese that used to be in the fridge and a small mouse ran into it and stole it while the cat was trying to find out how she can drink from the glass.. How she can drink milk from the water of.. Glass of water.

Narrative 4: Picnic to the park
Language of the narrative: Nor
(Interviewer: Norwegian, you can start) ok, so eh..fisk, tre, regn, eh..Ball um...kids, nei um..Gutter og jenter, dog eh..Hund sorry, bil, fjell. Eh...(participant: what does children mean in norwegian?; interviewer: barn; Participant: Barn ok) ja, ok så historie... historie nå. Eh..det er regn eh..Og et..det var regn, etter regn eh..Ble det regnbu i himmelen, eh..Barna leker eh..utenfor og de drømmer at d leker med ran.. Regnbuen eh...de hadde en ball som også samme farge som regbu eh..Fiske også det finnes en fisk i elven eh..Ved si eh..I elven som har eh..Regnbu farge og i naturen utenfor eh..er i bakgrunnen av eh..Område er det fjell og træ..eh tre som står der eh..Og det er en hund som leker sammen med barna og....det er en bil som kjører ved siden av de.

## Participant : 32

Narrative 1: Dog

Language of the narrative: Nor
(interviewer: you can start) ja, i første bilde ser jeg en um..Hund som eh..som ser en mus også kanskje hunden har lyst til å spise den eh..Også i .. i det neste bilde ser jeg en gutt som har en eh..en gul ballon og en pose også som inneholder noen mat eller matvarer og sånn. Um..dogen i eh..Dogen (giggling) hunde i..i andre bilde eh...prøver å gripe inn i mus huset ..ja. Um..ja gutten ser om um..at uh...at dogen um..Eh..ja har det skru opp på tre eh..også ha..vil hjelpe han men han stårs inne? sin eh...ballong også..mens personen ser på at ballonen har um..har fastet på treen eh..eh..merker dogen [AMB] av en.. en pose som inneholder ja mat eller kjøtt så han er kanskje sulten og vil spise det. Ja, eh...eh...gutten har fått eh..sin balloon og eh...eh..mens um..mens hunden begynte å spise pølser [AMB] eh gutten er glad fordi han fant eh..sin balloon og eh ja hunden og glad fordi han har mat nå.

## Narrative 2: Cat

## Language of the narrative: Eng

(interviewer: you can start) uh..I see in the picture a cat and a butterfly and um...a boy eh..who has um...eh..um...ja, bucket eller..bucket of fisk.. Of fish um and eh..ja and the cat try to catch the butterfly um...ja. (Interviewer: this is the second one). Um...the cat .....can't go out.. Of the tree and the.. the boy eh..They has eh..he has lost his ball eh...in the sea um..The cat saw the fish and uh..And maybe it thinks about to eat uh..The boy want to help the cat....ja. uh..the boy um..the boy take ..take the ball out of the uh..out of the water um..eh..while the cat uh.. Try to eat the fish uh..The boy is happy uh..because he find his eh..his ball and eh..the cat eh..ja is eating the fish.

Narrative 3: Cat \& mouse
Language of the narrative: Nor
(interviewer: you can start) jeg ser på bilde en katt, et glass, ost eh..ei jente, mus, et kjøkken, melk, et glass vann. Eg tror at jenten um..vil komme inn kjøkkenet for å drikke litt melk, så så hun et mus som spiser eh...osten jentene eh..har en.. Har en katt også hun drikker vann (giggling) (interviewer: ok ?, anything else you want to say?: Participant: no)
(Interviewer: You can start,) eh..i see uh..En tree, rain, mountain car, dog eh..ball, eh..children, cheese eh. And fish. Eh..in the car eh...in the car um...um..there is um..eh..en family who.. Who want to eh..who want to drive to the eh..a høy mountain eh..And the family eh..took with them eh..eh..Them dog and childrens um..Eh..on the side of the mountain there is en.. R.. river um which has eh..a.. A much of uh..Colorful uh..fish uh..the weather uh..the weather uh..Was very bad uh...and eh..it was raining. Eh..and they a um..And the tree and the children uh..uh..Want ..want eh..want to play football uh under this tree.

## Participant : 33

Narrative 1: Dod

## Language of the Narrative: Eng

(Interviewer: you can start; the participant asked again if she has to tell the story in English, the interviewer says, yes)

I can see that there is a house and a tree eh..there is a dog and a mouse eh..it seems like eh..this dog and the mouse they are playing with each other. And concerning the semester, i think the semester is fall because there are .. because there is no leaves on the tree this is what i can see actually and.. There are maybe three houses on the top of the.. Picture and.. But i can see that the earth is green, but it's..it's like a kind of there is no connection between ..because the earth is green, but the tree there is no leaves so we do not know what's the relation here. Uh..and in one of the picture i can see that the mouse is going um..into the tree and in the other one eh..The dog is just trying to come near to...this [AMB] in the tree. We could see also that there are many different colors in these two pictures, like green, brown red,yea, this is maybe everything i can si about the picture, there is also like uh..We can see a little bit of the sky like a blue, little bit blue, ja. Eh..with this picture, we..we can understand the ..the subject here more because we can see that there is a boy is,,is coming also eh..with these two the dog and the mouse.an...and it seems that this boy has a balloon which has come to ... to the top of the tree eh..It's.. there is also the boy has something with him ..the bag, but actually i'm.. I do not know what kind of things which is in the bag.. I can't guess (Interviewer: your voice is too low) I am talking about what the boy has in the bag which is in his hand eh, yes and when eh..The dog and the mouse trying to play, the mouse was so small and he could go into this [AMB] which was in the tree and went to the other side, but the dog could not do that because the dog eh.the dog size is so bigger than the mouse, yea. Eh..yea in this picture i can understand the subject also more, because i can see in every picture that the subject to be more um..clear or clearer . her in this pictures, uh..i can see that the boy is trying to bring the
balloon which was on the top of the tree and now i can understand what was in the bag which was with the boy. It is hot dogs because the dog now is trying to go eh..to the bag and trying to eat but eh..I canlt see the mouse here in these two pictures. Ja, and after that, the boy has eh,,,has brought his balloon from the tree.

## Narrative 2: Cat

Language of the narrative:Nor
(interviewer: you can start) ok, I can see, jeg kan see i dette bilde at det er en katt og det er en gutt eh..Det er også tre.. Eller et tre eh..hva er mer, kanskje fjell og ha.. Havet, jeg vet ikke jeg prøver å husker noen ord , ja..ja dette alt sammen kanskje jeg kan si om dette bilde. (interviewer: what do they do here?) uh $æ$ tror her den...eh...denne gutten han kom til å eh...hente fisken eller til å fiske fra haven og den eh..Liten katt leker med $\mathfrak{x}$ vet ikke,.. Æ glemte hva heter den eh..denne ord fordi den katten leker med en.. en ting ja, uh...her uh..også jeg kan see at katten har litt vondt på grunn av dette tre og....den gutten også han har ball som gikk til.... Vann og den gutten prøver å hente denne ball fra vann, og.. I kan see også at gutten eh...tre fiske.. Fisker også som han har hentet fra vann idag. Og.. vi kan snakke også litt om farger vi kan se her mange farger som grønn, eller rød, eller blå. Det er også fjell og...ja, dette alt. Kanskje. Her..her også vi kan.. Vi kan se at gutten har hentet eller hentet ball fra vann og katten starta å spise fisk og etter på... eh..begge gutten og katten eh..Var glad fordi gutten har hentet ballen fra vann og katten har spist fisk også så de er glad og kanskje vi kan snakke litt om... om være fordi det er eh..Litt sola æ tror det er sommeren nå som ..som kanskje vi kan see her..see her fra dette bilde ja, og vi kan se også litt blomster eh..i denne..eh tre ja.

## Narrative 3: Cat and Mouse

## Language of the narrative: Eng

(Participant: should i first mention the photo and then start telling a story? ; Interviewer: you need to mention the name of these things you see in the photo first, and then you can make a story) okay, I can see in front of me many different pictures. uh..I can see a cat, a girl, cheese and a mouse, uh..and glass of water, and milk also, and we have eh..a picture for a kitchen. In this kitchen we have eh..some fruits like, apple and eh...i can't see this,.. I can't see very well and we have also bread. We have here maybe chocolate, I'm not sure and we have eh..eh..toast også, i made a mistake (giggling) i mentioned the Norwegian word he (interviewer: it's ok) eh..we have a fridge also. Eh..this is what ... there is a window, there are ..(Interviewer interrupting: it's ok just a kitchin, you can just say, a kitchen. You can make a story now) ok, (giggling) ok, um..we can make a story like eh..there is eh..a girl in a house. She is uhm..in the kitchen now. She went to the kitchen to...uh ..and this girl has cat in here
house. She went to.. The girl went to the kitchen to drink a water and.. And while eh..She was in the kitchen uh..she saw a mouse who.. Which try to eat a piece of cheese which was uh..Which was uh..in the kitchen [AMB] near maybe the fridge and eh...after that, the girl was thinking to drink a milk eh..and eat something like bread and take some fruits also with her, or make a kind of sandwich uhm..using chocolate or tomate maybe ...maybe i can see here a tomate ..tomato. so this is the story that maybe we can make it from these ..different pictures. .....(interviewer: just a second).

Narrative 4: Picnic to the park
Language of the narrative: Nor
(Interviewer: ok, you can start) okay, um...her vi kan se at det er eh..tre barn eller k..kanskje $æ$ kan lage eh.. Storie fra ..eh..alle disse bilde..bildene som de har her for eksempel det er eh..tre barn som gikk på tur de gikk med bil og de gikk til eh..en fin plass eh...i denne plassen var mange fjell, det var også havet og... det.. I denne havet det var fisk og..og barna har hund med dem og været det var veldig fint, men eh...det var eh.. Regn etter eh..etter to timer det var litt regn og etter på barna de gikk under tre og etter noen timer stoppe rain og det var fint været etter på og barna eh.leke... har leket med ball og etter på de ...tilbake hjem med bil også og da [AMB] var slutt.

## Participant : 34

Narrative 1: Dog

Language of the narrative : Nor
(Interviewer: you can start). I de to bildene ser jeg en hund og en mus. Eh.ii det første bilde til eh..Venstre ser jeg at mus leter etter jeg vet ikke, et eller annet så kommer hunden bakover. Eh.i det andre bilde så ser jeg at det er et eh..menneske eller en dame tror jeg som kommer forbi eh..og mest sannsynlig så er... så tilhører ...så tilhører hunden damen det er kanskje hennes bikkje. Så ser jeg at hunden løper etter musen, men jeg klarer ikke å se hvorfor. I bilde nummer tre ser jeg at hunden krasjer i eh...i treet og musen står og ler. På grunn av det så kommer eieren nå ser at det er en mann nå ser at han kommer eh..At han kommer eh..Nærmere hunden slipper ballongen kanskje på grunn av sjokket eller på grunn av at han er um....ja redd ..redd kanskje noe skjedde med hunden. Eh..så ser ej at han har pølser i ...i posen. Når ballongen slippes eh..så sitter fast i treet eh..Og da ser vi at eh..mannen prøver å hente ballongen eller få den igjen eh..mens hunden eh...sitter på...mens hunden sitter på gresset og se og ser på posen som eh..muligens er hans mat. Nå ser jeg at jeg har tippet riktig eh..For nå ser vi at hunden prøver å spise, jeg vet ikke.. Spise pølsene. Hente de ut fra posen
eh...mens gutten er opptatt med å hente ballongen som sitter fast i treet. Eh..i det siste bilde så ser vi at begge er fornøyde, både gutten er for.. Fornøyd med å få sin ballong tilbake og hunden er fornøyd med å få en god matbit.

## Narrative 2: Cat

## Language of the Narrative: Eng

(Interviewer: eh.. English) ok, eh...i am seeing one cat eh..Running toward a butterfly eh..at the first second, I ..i was thinking that she will play with it, but i think i'm seeing that she want to eat it, and i did not that the cats.. Butterfly. Um, and in general i do not like cats. Eh..afterwards, you can see a small boy coming eh..Toward the cat, but suddenly, he miss his ball and eh..And at the same time he see that the cat is struggling eh..(Participant in Arabic: i do not know what does shoujayra "bush" mean?) in the tree and eh..but then he missed his concentration and run after his ball eh..That he missed in this picture or on the picture, and then the cat see him and for one or more reason she becomes happy because sh.. She can see the fish eh...in his bucket. (Interviewer: can you come closer to the mike because your voice is too low) eh..Now i can see that the boy eh...is..eh.. Is busy, trying to save his ball from the eh...from the water ..from the water and eh..And in that time, the cat eh..eats his fish eh...and he can't see here. eh..At the end eh..both the cat and the boy becomes happy because he can get back his ball and the cat is happy to get a good meal.

## Participant : 35

## Narrative 1: Dog

Language of the narrative : Nor
(Interviewer: you can start Norwegian) ok, eh..her er det en hund som gå på veien og ser en liten mus, også begynner han nå løper etter musa og musa gjemmer seg inn ..i.. inn i tre og ..også er det en mann som går med eh..Ballong ja. Eh..og her banker hunden..døra..eh banker hunden hodet hans på treet og da mann ser han så mister han ballongen i lufta for at han skal hjelpe hunden. Også ballongen blir eh..satt fast på treet etter at mannen har hjulpet eh....eh...også mens mannen prøver å.. å ...hente ballongen så ser hunden ...pølse og så går han til pølse å begynne å spise det mens eh...mannen hente ballongen og ser ikke (giggling). (Interviewer: last picture). Også får.. Mannen tak til ballongen ....og blir glad. Også ser han også eh..er hunden spiser pølse.

## Narrative 2: Cat

## Language of the narrative: Eng

(Interviewer: yes, we will start in English, you can start) eh...in this picture i see a cat and a butterfly, And the cat start eh..running to the butterfly and then the butterfly start flying and i see a guy that is probably is going to fishing. Uhm..here i see.. The cat eh...maybe getting hurt by the small tree and eh..The boy looking at the cat and his ball is running out to the water, ja after he got the fish. Eh... and here he is trying to... to get his ball while the cat looking at the fishes and getting hungry i think. Eh..here the boy trying to get his ball and the cat got his fishes and started eating them and here.. Here is the boy holding the ball eh..Ja while he's smiling.

## Participant : 36

Narrative 1: The dog

Language of the narrative: En
At first two pictures, i see tree and some houses and uh....dogs and mouse. They see some young guy he have a balloon on his hand and some hotdogs in his bag and he have yellow, no. it's not yellow, blå eh..Yellow balloon and there is some houses back in this garden and the dog trying to eh..Catch the mouse at first he looking at him and then he catch it and the mouse ran away from the dog $\qquad$ Then i see the young guy looking at the dogs, the dog because the dog hit his head on the tree and the mouse looking at him and the young guy was eh.. Sjokert uhm....He was surprised and eh....He let the ballong fly and the ballong fly to the tree ..... And he wanna catch the ballon and he sla (the participant wanted to say slapp) let his hotdogs back.. back him and he come to the balloon to catch the balloon an eh....He wanna take the balloon from the tree $\qquad$ and he tried to take it when he take it so the dog he go to the hotdog and spis.. (the participant wanted to say spise "eat") and eat everything . When $\qquad$ Yes it is all.

## Narrative 2: Cat

## Language of the narrative: NO

Yes, ja da ser jeg på første bildene en katt som eh....Ser på en sommerfugl .......sommerfuglen står på en grass eller noe sånt, også ser jeg på bakgrunn at denne er jo på en eh..uteplass sjø... ser jeg også strand ja så katten prøver .. å ta sommerfuglen så på den bilde.... andre bilde som her ser jeg ja, en gutt blå klær; blå t-sjorte og blå bukse som har på hånda en fiskestang også en rød ball under armen så har han på hånda venstre
hånda...fisk, nei det e en bøtte med en fisk oppi .....yes, går vi videre, ja så ser katten prøver å ta sommerfuglen .. han treffer ikke sommerfuglen, han ...treffe den grasset som står der det e ikke grass på en måte det e en små trær....... Gutten blir sjokert også slipper han ballen så går ballen til eh...sjøen .. han prøver å ta ballen ifra vannet slippe fra handa fiskestangen og ....(cleaning throat) og så fiske bøtte .......han prøver å ta den ballen ifra vannet med fiskestangen mens katten går bak han også eter alle fiskene han eter alle fiskene fra bøtte også får han gutten tak i det balla mens katten har spist ferdig en fisk så eh...så det er alt .

## Participant : 37

Narrative 1: Dog
Language of the narrative: Eng
(interviewer: you can start, English. Your name is ...., right; Participant: yes; Interviewer: okay, good. You can start; Participant: i will start with the photo on the left, okay; Interviewer: the left one, okkay) okay, i will begin to ..to see what i see at the picture. At the left.... At the first i see like a mouse, and this is running from a dog and a dog as also running after the mouse. Uh..ok uh..in the right picture, $i$ see the mouse is going inside the tree like...uh down of the tree and the dog tr.. trying to go after the mouse again and that was everything [AMB mumble]. Okay, here i see the mouse uh...did go inside the tree and the dog like crash with the tree and the dog could not go inside eh..The tree.. Also the ..the dog couldn't catch the mouse and i se a little boy who is coming..eh ..with that bag with maybe banan or i can't see very clear but yes, the boy he's coming. Okay, the picture .. in the right, ...I see the dog did go like to..to right.. right side and the boy is looking up to the tree ... that..eh $i$ think the boy is ... is looking at the ballon ...yes, it was everything and i.. I can't $i$ can't see the mouse anymore, so yes. Okay, yes so i did think right. The boy was... was trying to get the balloon and he did got it eh..From the tree, and the dog is going to the.... To the bag eh..Here the boy had with him eh....(giggling) okay, at the right, the boy is holding the ballon, he get the balloon and the dog is eating ...i think it's eh...that's called.. Hot dog yes. The dog found hot dog at the.. at the ..the bag here the guy ...here the boy had. So that was everything. And.. i don't what happen with that mouse. I think it is inside the tree.

## Narrative 2: Cat <br> Language of narrative: Nor

(Participant: we had to start from the right.. Left; Interviewer: the left. You can start. your name is ... right?; Participant: yes; Interviewer: you can start ) uh..ja, hvis jeg skal begynne med ....en bilde som er til venstre så ser jeg um..en sjø altså en strand på en måte, også ser jeg en liten tre. Også står en møll på treet. Også er det en katt ved siden av treet som holder å se på ...på møll. Andre bilde, så ser jeg at eh...katten har prøvd å"ta på ..ta på møll, men møll har
bare flyet seg videre også, så jeg tror katten ...kunne ikke tatt på den. Ja, her så ser jeg en gutt som kommer gående ...som har med seg en bøtte av fisker også en ting som han kan fiske med husker ikkje helt hva heter det på norsk. Kanskje fiske eh....Husker ikke også er det en ball. Æ tror han mista ballen ...også ser han på katten. Eh..det som skjer med katten er at den bare dreide seg på treet den bare gikk inn i et treet og så ser det at den har litt vondt. På andre bilde så gutten bare lå bøtte av fisker i gulvet altså i gresset ...og så han, ..æ tror han skulle hente den ballen som falt i sjøen og katten gikk .. gikk av treet. Og så, bare et øyeblikk beklager,.. Æ tror katten ser på fisken eller ikke, ikke helt sikker enda (giggling) okay. Ja, her så.. Så henta han gutten ballen med fiske greie som han fiske med også ser at katten ja den, egentlig så den så på fiske bøtte så den bare gikk imot der. Og så i siste bilde så ...ser at katten den ..den sitter seg og ...og spiste noen av fisker han fiska da og han fikk eh...han fikk tak i ballen som var i sjøen, og det var alt.

## Participant : 38

Narrative 1: Dog
Language of the narrative: No
(interviewer: you can start) jeg ser her to forskjellig bilde; ja a.. Ein dog ein (giggling) ein... ein hund og ein mus uh..Mus uh sorry, .... (Participant: i mixed English and Norwegian; Interviewer: just keep talking, keep talking) um.. Det er ein uh ...ein (participant whispering something i could not understand) ... det er ein hund som gå bak mus og han prøve å ta denne mus men denne mus uh Gøymer seg inne på ein tre. (interviewer : What else do you see?) og det er ein gutt som kommer bak.. Bak eh...hund. Han har med seg et ballong og har et pose som har inni eh...pølse. Men denne gutt han har ..han har mista eller han har mista denne ballong. Han har denne ballong som fly og.... og komt på eit tre. Han.. han prøver å ta denne ballong ned og me kan se også ned ein..denne dog..denne hund som... denne hund som traffa hodet på et ved og på andre bilde me kan se denne ...denne hund som sitter å se på.. På et pølse pause.... Og me kan se også denne gutt som ser på ballong og han tenkte at korleis skal han ta denne ballong fra tre. Denne gutt han prøve å klatre denne tre for å ta denne ballong han har ta denne ballong men me kan se også bak denne gutt at hunden han fikk denne pølse fra eh..pause uh..Fra denne pause og han beyn,, og hunden begynne å ete denne pølse. Ej tror at gutten bli.. Eh..bli ..bli ...han bli glad fordi han har eh..Ta denne ballong fra tre ... og me kan se også at hunden også glad fordi han har ete cirka alle pølse.

## Language of the narrative: Eng

(Interviewer: okay, i have started to record, you can start) uh...now i want to speak about the two pictures eh..i see... one cat .. she ....she's play with a butterfly and... she's jump back ..jump back the butterfly ...(participant: is that ok; Interviewer, yes ok, just continue) m ...the cat play with the butterfly uh...and she's eh..jump back the .., the butterfly eh...(Participant: is that ok?) and ..i see one ...one man she's come to ..do ..to get fisk from the sea .......and he's have a ...a ball and ithink he's will play ..play football. But the cat she's eh....holding the ..... (whispering something in Arabic AMB) sorry i forgot, (interviewer: no problem ) um....(Interviewer: what is the cat doing?; What is the boy doing?) the ...the boy uh..Look at the cat and he's ... i think he's bli shocked because the cat ...have eh..Fall in the ..in the ...(Interviewer: small tree; participant, I'm sorry, but i forgot; Interviewer: it's ok just keep talking) and ...the boy ...the ball it's fall also in the water and the cat see to the fish and i thinks she's very ...go and eat the fish. It's ok,...ok. The boy ...eh...the boy he's got the ball from the water, but we can see back the boy it's the fash? ...eh the cat he's get the fish and start ..and start eat the whole the fish, ..it's ok (Interviewer: have you finished)

## Participant : 39

Narrative 1: Dog

## Language of the narrative: Nor

(interviewer: you can start) okay, firste bilde jeg sier mus og hund and trær, ja e men ikke brunn træ eh...med blad ...bl ...ble ...bled (participant in arabic: Oh, the tree leaves) ..bled b b.l.i.d ...bled ..blad ja, blad um okay jeg sie [AMB] and jeg see tree huset forskjellig taket bru taket og taket grønn taket and forskjellig color til huset hvitt og gull and hvitt ja and en huset ..et huset har eh...bare en ...en vinduet okay, and jeg sier green eh...klat? ..or gulvet hav heter ok and denne hunde, ikke vi si denne ...dette la "no" ikke det ..ikke det ..denne ...ikke denne ja, but we see something the,... we see the, eh..har ....(the participant whispered some words i could not understand in arabic) my God ...I glemte og he have necklace (laughing) ...jeg glemte hva heter denne ja, [AMB] say it always about his hunt. Okay, and andre bil ...andre bilde jeg sier mus løpe til um...trær inn la "no" ikke in, in english uh ...på la "no" ikke på (Interviewer: Souhaila, you should be independent and do the narrative alone without the help of your husband; Participant: no, no i don't ask my husband. Participant start to start a discussion about the photo, but interviewer stops her and explain that he is recording at that moment and every this she will say, the interviewer has to mention it in the transcription. This is will be so difficult. Then the participant says unnskyld "sorry") jeg see mus løpe til eh...trær okay , and hund kanskje er um...husk ...hva sier hop ...ej ..ej glem denne og ja, and ej
sier fra eh ..see denne og en gutte kommer til ..... med hånda balloon gull balloon and kanskje hun klar lille klar and har eh...uf....uh...pose med eh...uff..sausage ...sausage. (interviewer: ok, next picture) ok, så men hund har eh...uh..har..eh my God hund ..mend hund er...uff...uh (participant: my children use this word so often but i forget it) men hund har eh...gle ..nei ikke .... [Amb] ja ,ja bukt ..brukt ...ban ..panke, nei ikke panke (Participant in Arabic: no, panke comes with the word door)uff..jeg glem denne ord and the ballong går til trær oppe men eh..har .....denne ...gutten er eh...shocked hva heter ..skem ..nei ikke skem .. ok ej glemt hva heter (Interviewer: continue, continue, it's ok) ja ,ja ballon er opptatt på $l$-trær men eh ..denne pose med shock eh..pølse ...pølse kanskje, pølse på gulvet and the hund ser på ..på ..på pose [AMB] vil kanksje spise pølse , kjøtt and the bo eh...the gutt tenker hva gjorde til hente han balloon. Okay, 1 .. gutten løpe til trær tatt balloon og hund tatt pølse kjøtt and spise okey , men andre bilde vi ser eh...gutt har mi ...mellom hånda har balloon and gu ..den eh..hund er spise kjøtt, pølse som tatt fra pose and spise kjøtt okay. (Participant, my Norwegian is terrible, ..laughter, ...she continues in arabic and says:, sorry for my self).

## Narrative 2: Cat

Language of the narrative : Eng
(Participant: laughter- i always speak english, but now Norwegian) In the first picture, i see cat eh..next to the little tree and want to take butterfly, want catch it or something like that, and in this picture we see like river, and muh...meh..flat green um..maybe it's river or next to the sea or something like that okay, and the next picture we see eh...eh..the cat want eh...what..eh ...catch ...catch neh..fange ..not norsk eh .catc (Interviewer notice that the participant talking to her husband and ask him for some help. The Interviewer asked the participant to do the narrative by her own) and the cat he want to catch the butterfly. And i see boy coming from the other side with eh...having in one hand eh..fishing ...he was fishing or something and the other one eh...stuck of fishing. My husband he fishing but he not remember his name. And under his hand he have ballon, red ballon uh..red, ja ..red ballon and the boy he dress blue and he use sandal, summer and he look happy. Okay, in the first picture, i see the ..the ball (interviewer. Sorry this one) ah, ok i see um ..the boy he was like eh..shocked or something because the cat he following in this tree and he have pain or something so he lost his balloon, the balloon falling down in the floor and the butterfly it's fly away from the cat and the boy he was like shocked or something so he still in same place. But in the next picture, i see the ..the balloon he go in the water and the boy he wa ..look like sad or something because his balloon go far away and the cat sees, ..she see the k...um the fishing ....the fish so she was thinking she wanted to go to skip it ..to eat it (the participant whispered some unclear words with low voice) okay, the boy he le ..try to eh...to henting or taking his balloon from the water we would use the ..stuck of fishing but eh..the cat behind him she wanted take the fish she want eat the fish so she following the fishing [AMB] in them, she wanted ..she want she don't do it but she want following the fish in the floor. But next picture ...next picture i see the boy he take his ballon in his hand and he was so happy and the cat wow she eat the fishing and the boy she lost them he lost he lost.

# Participant : 40 

Narrative 1: Dog

## Language of the Narrative: EN

(Interviewer: you can start) ja, uh...in the first picture i can see ...a dog and um...and a mouse. Eh..the mouse .. i think the dog is chasing the mouse eh...(giggling) i think eh..eh..the mouse is heading to uh..uh..inside the tree. There is a .. house ..three houses um..far uh..far away from the dog and the mouse. In the second picture, I see the same um ..uh...i can see the same three, th ...the same tree three the same ja and the same um...houses. I see the dog and the ...mouse eh..now the ca ..the dog is chasing the mouse inside the tree and they are heading eh..toward the tree (giggling) ja. In the third picture, I can see uh..boy. I think he came out of the ..one of the houses..eh... um and i see a balloon i don't know if the boy had the balloon or not. Um..the boy had um..have eh...um...shopping bag with potatoes ithink and eh...there is some drama going on with that dog and the mouse. I think eh..the dog bumped his head in the tree eh..when he was chasing the mouse. Eh.in the fourth eh..picture, i see the balloon stuck in the tree ..three and eh..tree ..tree, okay (giggling) and eh..ja, the boy uh..wanted his balloon uh .. the dog, now it's not chasing the uh ..mouse, it's, uh ..he ..nei ..it's going to the potatoes i think, uh..the bag with the potatoes, ja. Eh....yup. i think the boy and the dog eh..aiming to .. what they want. I think the boy he's going toward the ....ballong uh...and jumped high on the sky for eh..the balloon and the dog is eh..oh i think it's sausage it's not potatoes (laughing) ja, um..the dog is taking one of the sausages from the bag. Uh...the last uh...the last picture uh...ja that the boy took his balloon and the ...dog ate his sausage....And the end.

## Narrative 2: Cat

## Language of the narrative: Nor

Her på bilde ser en katt som jeger etter en eh..et sommerfugl .....er rundt treet. Uh...på andre bilde tror jeg s...uh katten hopper over treet for å nå eh..sommerfuglet og alt skjer på et plass med...uh ...kanskje uh...vann rundt vann [AMB] men jeg vet ikke hvis denne er hav eller...eh ja, kanskje vi kan ta hav eh ..ja. Neste bilde, ja, her kommer en gutt som har ...som har fi ..fi ....fisket eh..han hadde ball på seg uh...ball er rød, ok um..katten stuck på treet uhm...gutten kom for å se hvordan det går med katten eh..men balle gikk i vannet og så guten forlot eh...eh hva heter den um..fiskene som han hadde fisker (giggling) og gikk til å sjekke på ballet uh ...(Participant asked in arabic to adjust the size of the photo). Ja, takk, uh...ja ...jeg vet ikke hvor er sommerfuglet, men denne er ...tror på andre side og vi kan ikke se den på .. vi kan ikke se det på bilde nummer to..nummer fire, ja uh...neste bilde, ja uff..eh katten gikk til fiske uh..og gutten,... jeg vet ikke hva den heter, den som alle fiske på, jeg vet ikke hva det heter på norsk, men eh...guten tok den ...[AMB] ..tok s...du kan vi kan se at den er stick
...(giggling) han tok sticket og ..um.. og boy her trengte å ta balla fra ... vannet så han bare tok sticket og ...retunert det .. balla (laughter) ja, fra havet eh ...gutten fikk balla yea, den rød balla eh ..og fisken og eh..katten sist ..spist en fisk ja. De var du glade uh..ja alle fikk hva de ønskte.

## Participant : 41

Narrative 1: Dog

## Language of the narrative: Eng

(interviewer: you kan start) ja, eh..In this picture to the left, i...see a.. Mouse that running away from a dog eh..It look like they are in eh..Eh..garden. The mouse trying to go into the tree eh..There is also eh..Some houses..eh.. Back there eh..I think it's summer season, um..Yes. and in the picture, in the next picture so i see that eh.. hM.. eh that the big ... try to eh..Catch the mouse but it was not eh..He was not likely eh..And there is also eh..Boy who's coming eh..Who's going um..And he .. he had a balloon but after he saw the dog and the mouse, he just eh..Mista (giggling) ball..ballongen eh..Yes and he um...the ballong come opp to the tree.. Tre eh..And now eh..the boy eh...looking at .. he..he look like.. He's thinking how he will get back his ballong...um, ye. In this picture, uh..I see the gutt, eh..The boy eh..Try.. trying to get his balloon again and he.. He.. han klarte det but i mens so the dog run to the...meat, he just start to eating the meal..eh the meat eh which the boy eh..Has or had (giggling) eh..early earlierly, yes.

## Narrative 2: Cat

## Language of the narrative: Nor

(Interviewer: you can start) ja, hei. Jeg skal begynne med ...det bildet eh..Til venstre. Jeg ser jo en katt som prøver å catche en sommerfugl og det ser ut at det er jo sommer. Eh jeg ser også.... U..sjøen eh..Men sommerfuglen klarte å fylle bort. Eh..også det er jo en gutt som kommer til å .. og har med ..og bærer med seg eh en ball og jeg tror han kom til å eller han er jo ferdig med å fiske. Ja, også i det neste bilde eh jeg ser jo at eh...gutten mista sitt ball den falt på gulvet eh..ha..han har jo eh...fisket mange... fisker eh..også katten ehm..Falt ned i like som en liten eh..Tre, eh også i nes.. I det neste bilde til høyre jeg ser at ba.. Den røde ballen kom inn i vannet også gutten eh..sjekke på det og tenker hvordan han skal eh.. Tringe (bringe) den tilbake eh..Også katten jeg tror hun ....sjekker nå på de fiskene også hun tenker til å like som spise det, ja. Ja, også neste bilde eh..til venstre jeg ser at eh gutten prøver å ta ballen ut av vannet mens eh...katten eh tar fisken...eh.. Og til slutt klarte guten ta den ballen ut eh..Også katten hun er jo nesten ferdig med å spise alle fiskene der, ja.


[^0]:    ${ }^{1}$ Classic Code-Switching (CS): "is defined as CS in which empirical evidence shows that abstract grammatical structure within a clause comes from only one of the participating languages" (MyersScotton \& Jake, 2008, p. 337).

[^1]:    ${ }^{2}$ Link to the online level English test: https://learnenglish.britishcouncil.org/online-english-level-test

[^2]:    ${ }^{3}$ The pictures for the stories can be downloaded at: <www.zas.gwz-berlin.de/zaspil56.html>

[^3]:    ${ }^{4}$ The link to the online Chi-square calculator: Chi Square Calculator - Up To $5 \times 5$, With Steps (socscistatistics.com).

[^4]:    ${ }^{5}$ B1-B2 is the minimum required proficiency level in Norwegian for university admission, B1-B2 stand for an independent user of the language. https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=090000168045bc7b

