The relationship between topic and metaphor in second-language learners' essays

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In this article I investigate to what extent the use of metaphorical expressions in language learners' texts vary according to the topic they have chosen to write about. The data come from the Norwegian learner corpus ASK, where the texts are from written assignments produced by adult second-language learners as part of an official Norwegian test and texts. Texts from two different prompts are selected, which are related to friendship and nature. Metaphors are defined according to conceptual metaphor theory and a triangulation of methods is used, alternating between a manual and an automatic extraction method.

The results confirm the hypothesis that the two different prompts given to the learners in a language test not only triggers different metaphorical expressions but also influences the amount of metaphor used in the learners' writing. This knowledge is important to researchers for comparing the use of metaphors between different groups, such as between different learners or between students in different stages of education. It is also important for test designers who decide on topics to be used in tests and teachers who help learners prepare for their tests. And researchers, educators in general and the learners themselves are interested in the effect the use of metaphors in texts have on raters' evaluations in high-stake tests.

1   Introduction

The existence of a strong connection between the vocabulary used in texts and their topics is obvious (cf. Harsch & Rupp, 2011; Reid, 1990). However, what is less known is the fact that this strong interdependency between vocabulary and topic is not limited to what are generally counted as subject words (subject terminology) of the text, but also includes words considered to be non-subject vocabulary. Even high frequency words differ according to the topics at hand when collocations are included. In an early project on Norwegian schoolbooks in the 1980s, I found that about half of the lexemes not considered subject terminology by the teachers were in fact subject-specific: they occurred only in one of the three subjects of geography, history and physics. (Golden, 1984, 2012, 2018). As has been demonstrated in other studies (i.a. Gimbel, 1998; Klintenberg, 2014; Olvegård, 2014), these words are a challenge for learners with a limited vocabulary.

Additionally, research on vocabulary in the frame of cognitive linguistics shows how prevalent metaphors are in all kinds of texts, including texts written by second-language learners (Cameron & Besser, 2004). A relevant question is, hence, to what extent the metaphors used in adult learners' texts also vary according to the topic the learners choose to write about, both in relation to frequency of use and types of metaphors (see below).

This study investigates whether metaphorical expressions are equally prominent in texts written as answers to two different prompts, whether the prompts seem to encourage the use of metaphorical expressions to different extents and whether the conceptual metaphors used are different. The data come from a Norwegian learner corpus, ASK (see below). The article starts with a presentation of the approach to metaphors adopted in this study and a review of relevant research on metaphor use in learners' texts and the relation between genre,

vocabulary and topic in tests. Thereafter, the data are described in more detail and the methodology applied is provided. The next section presents the main findings in the study and these findings are reviewed in the final part along with a discussion of how the use of metaphors might be perceived by raters in test situations. In addition, a careful use of corpora in research when texts are compared is encouraged.

2   Metaphor theory

According to Lakoff and Johnson (1980), metaphors are "pervasive in everyday life, not just in language but in thought and action" (Lakoff & Johnson, 1980, p. 3) and texts written by language learners are no exception. Metaphors are defined here according to conceptual metaphor theory (CMT) as presented in the work by Lakoff and Johnson (1980, 1999), Lakoff (1987) as well as other scholars like Gibbs (1994), Grady (1997) and Kövecses (2005). In this approach there is a distinction between (*metaphorical) expressions* that are found in the texts and (*conceptual) metaphors*, which are seen as general mappings from a source domain to a target domain are thus to be found at the conceptual level. The source domain is more concrete or closer to the body than the target domain, which is more abstract. The individual metaphorical expressions are taken to be instantiations of these general mappings.

3   Earlier research

This work is inspired by earlier research on vocabulary, where I investigated the use of basic verbs in learners' Norwegian in line with Viberg's studies (see Viberg, 1998, 2012). In one of these studies (Golden, 2011), I also used the ASK-corpus (see below) and looked for the proportion of literal and metaphorical uses of the high frequency verb *ta* in Norwegian (in English: 'take'); a high-frequency word that I expected to be found in all the texts despite different topics. The analysis of about 800 texts revealed a surprising result. In comparison to

the 584 second language (L2) learners of Norwegian, the 200 participants with Norwegian as their first language (L1) used the verb *ta* in its literal sense (e.g. *take a knife*) twice as often as the L2-learners[1] who used metaphorical expressions (e.g. *take a break*) more often. Part of the explanation for this unexpected difference turned out to be the topic of the texts, 55 % of the texts written by the participants with Norwegian as their L1 was about *Organ donation*. It was thus natural to say something about removing and receiving organs and the verb *ta* in its literal sense, both with and without verb particles in Norwegian, was a natural choice. None of the Russian or the German students and only 5 % of the Spanish students had written on this topic. The difference in metaphorical uses of *take* were thus not a consequence of crosslinguistic influence but of the topic at hand.

Studies of metaphorical patterns in discourse also display that metaphorical expressions tend to cluster at certain points in discourse (Cameron, 2003). It might be explained as related to factors such as the topic at hand, the intensity of the argument, the difficulty of conveying one's opinion (Stålhammar, 1997) as well as the function of the metaphors as a structuring device in the text (Koller, 2008). This was found in a study of textbooks where Askeland (2008) uncovered that metaphors were used more in certain chapters compared to others, and that the source domains were different. The conduit metaphor presented by Reddy (1979) was very frequent in the part about reading and comprehension but in texts about advertising, film and television, the source domains were mainly from the consumption domain whereas texts about the Internet used travel metaphors.

The impact of task on learners' performance has been investigated in different studies which have shown that students perform differently depending on the genre in which they are writing. The narrative genre is usually ranked as the easiest whereas the argumentative genre is the most demanding for students while the descriptive genre is of medium difficulty for L2

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[1] The texts were written by learners whose first language was Russian, German or Spanish.

students (Nemathi, 2003). In addition, research has revealed that the vocabulary used in different genres varies. Bednarek (2008) conducted a study on the occurrence of emotion terms in a corpus consisting of 19.5 million words representing different genres: causal conversation, news reportage, fiction and academic discourse. Her analysis showed that among the written genres, fiction texts rendered almost five times as many emotion terms than academic discourse, with news text in the middle. The genre of a text might, hence, not only influence the task difficulty, but also the amount of emotion terms used. And when emotion terms are used, there are reasons to believe that metaphors are used as well (Kövecses, 2000) and that this will have an impact on learners' performance on a test. However, research has shown surprising results regarding the relation between task difficulty and test scores. Hamp-Lyons and Prochnow (1991) tested the correlation between task difficulty (as perceived by raters) and overall writing scores. Contrary to their assumptions, they found that task types considered difficult by experienced raters, did not lead to lower scores. Similar findings were later reported by Huhta et al. (2014) in a study of second language writing in Finnish and English. Their conclusion was that even beginners could display their proficiency, although limited, in more effective ways in more demanding tasks. Also, as Hyland (2003) points out, there are individual differences; some students are just 'risk-takers' in the sense that they choose more difficult genres or include more metaphorical expressions in their assignments (Littlemore & Low, 2006; Mac Arthur, 2010). Hence, the relations of genre, task types and learners' texts are complex.

A related question is the how raters evaluate new or creative metaphors when they are produced by L2 writers. Do they consider these as vital and as an asset to the text (see Ahlgren & Magnusson, this issue) or are they just considered divergent (see Pitzl, 2018)? In a recent study, we presented 40 texts from the ASK corpus to 12 experienced raters for evaluation (Golden & Kulbrandstad, in press). These texts had been corrected for

morphological, syntactical, lexical and orthographical errors, but still some creative or unusual expressions remained. The raters were asked to evaluate the texts as good, medium or weak and to justify their choices. Among several justifications a dominant theme was 'Quality of language', implying that texts evaluated as weak were generally considered to have had a limited vocabulary and many unidiomatic expressions (ibid).

Such findings are of interest to researchers using corpora, particularly in vocabulary research. When corpora are categorised as balanced or representative, this normally refers to the text types that are included in the corpus: the amount of, for example, fiction and non-fiction (or even finer grained categories) has to be balanced or at least chosen in accordance with a distribution that is set beforehand. The topic of the texts is usually never taken into consideration even when it consists of learners' text. However, when the subject of the comparison is the vocabulary used in different groups (like learners with different L1s), it is crucial that the corpus is balanced also with regard to the topics of the texts. Even certain grammatical categories – like the use of verb tenses – are affected by the wordings of the topic, as is evident when comparing texts written as replies to prompts like *Write about your last summer experiences* and *Write about your plans for next summer*. According to Deignan (2008, p. 282) "it would […] be unsafe to claim that any corpus can ever be truly representative of the language experience of all speakers" and this is even more true when the content – the topics written (or spoken) about in the text collection – is taken into consideration as well.

When it comes to the general rating of texts produced in the test for adult learners in Norway, there is often no explicit mention of expected genre (Golden et al., 2017). But an indication of whether a narrative or an argumentative text is called for is usually apparent from how the prompts are formulated. This assumption led us to explore all prompts given to 200 texts written by Spanish and the Vietnamese test takers (ibid) and compare the

proportions of *expected* genres between these two L1 groups, there was no correlation between the genres and the rating of the texts.

Bearing in mind all of the above, my assumption is that texts written to a test will, depending on genre and topic, vary in its use of metaphor. This is due to the fact that vocabulary varies with genre and topic. I expect the source domain of the metaphors to be rather similar within texts about the same topic (and equally different between texts with unrelated topics), and certain genres in combination with certain topics will tend to facilitate the use of certain types of metaphorical mappings while other combinations will not. Descriptive texts about nature or a city house will probably not tend to trigger vocabulary from the same domain as reflective texts about friendship or happiness. In other words, the choice of topics presented to learners will have an impact on the source domains from which the metaphors are taken or at least the frequency of which some source domains are used – as the vocabulary seems to be so much dependent on the topic. My assumption is that the students' texts will prove no exception.

4 Data and method

The data in this study comes from the learner corpus, ASK. This corpus consists of texts written by adult second-language learners with ten different first languages, collected from two official tests, which give candidates certification of competence in Norwegian at two different levels. Included in the corpus are also texts written by adults with Norwegian as their L1 for comparison.[2] For the purpose of this study, I have selected 93 texts at approximately the B1 level according to the Common European Framework of Reference for Languages (CEFR), (Council of Europe, 2001). The texts at this level were supposed to be limited to a maximum of 250 words in the original test but varied slightly. Even if the instructions in the

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[2] See Tenfjord et al. (2006) for more information on the ASK corpus.

official test at the B1 level do not ask for a specific genre, the prompts vary in the extent to which they give the students different opportunities of being reflective, present an argument or just describe an event or an entity. In order to see if this difference will manifest itself in the amount of metaphors used, texts from two different prompts were selected for analysis. The prompts chosen were "Write a text about friendship", (hereafter called 'Friendship') and "Write a text about how you experience Norwegian nature", (hereafter called 'Nature').[3] The Friendship prompt gives the learners the opportunity to write a more evaluative and reflective text whereas the Nature prompt might restrict the learners to produce a more descriptive text. The authors of the selected texts are learners with five different first languages, see Table 1 in section 5.

5 Methodology adopted

Metaphors are often challenging to elicit in corpora as metaphorical expressions are very seldom tagged in a corpus. Different procedures for the identification of metaphor in corpora have been proposed by different researchers. Deignan (2005, 2009) used a source-oriented approach, while Stefanowitsch (2006) used what he calls the *Metaphorical Pattern Analysis* (MPA) in which lexical items from the target domain are used in a specific way. Partington (2003) as well as Charteris-Black (2004) and Semino & Koller (2009) started the identification of metaphors by manually analysing a sample of the data and then using their findings as starting points for investigating the entire corpus. Philip (2009, 2012) has combined a target-oriented and a source-oriented approach using the keywords function in WordSmith as a point of departure. These methods differ in being mainly theory-driven or mainly data-driven. The theory-driven ones are the methods that use the researchers' knowledge of which source domain is most frequently used for a target domain, while the

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[3] The prompts in Norwegian were *Skriv en tekst om vennskap* and *Skriv en tekst om hvordan du opplever den norske naturen*

data-driven ones are those that depart from the data and select search words after having read some of the texts. These methods have merits and demerits regarding time needed and accuracy of the results. In my study, I have used a triangulation of methods, alternating between a manual method (reading some of the texts) and an automatic extraction method based on the vocabulary in the source and the target domains, not very different from Philip's method. The words found in the texts that were read were supplemented with closely related words as well as vocabulary from two domains that have been proven to be frequently used as source domains in all metaphors in earlier research, the body domain and the temperature domain. The procedure was as follows: a) All the texts written by the Vietnamese students in the ASK corpus were chosen for the manual extraction of metaphorical expressions (four written texts on the topic *Friendship* and four written texts on the topic *Nature*). Then the first six texts from the Somali and Russian students were chosen, three from each text topic (see Table 1). b) After having read though the 20 texts, 24 words were considered metaphorical in the texts about Friendship and 16 in the texts about Nature, where the main criterion was whether there exists a more literal sense or body related meaning of the word in question in Norwegian. A total of 86 lemmas were marked as such from each topic, slightly more in the *Friendship* texts than in the *Nature* texts, with some of them overlapping (see appendix). c) These lemmas were used as search words for the rest of the texts including those from two additional L1 groups, the Albanians and the Germans. d) A supplement of 37 lemmas was also included in the search query. These lemmas consisted of frequently used words (*not* necessarily metaphorical) *closely related* to those that had been initially selected from the texts read, and included frequent antonyms (e.g. *hard/myk* ['hard'/'soft']), synonyms (*få/motta* ['get'/'receive']) and hyponyms (*legeme/hode* ['body'/'head'])), as well as words from source domains known to appear frequently in metaphorical expressions not already included (like words from the body and temperature domain). The total number of lemmas were 119.

TABLE ONE ABOUT HERE

6 Analysis

As seen from the literature review, written texts differ in many regards depending on the topic. This is the case for vocabulary and even for a high frequency verb like *take* when the collocations are considered. Emotion terms also seems to be more frequent in some genres than others. My assumption is therefore that there is a difference in the amount of metaphor used in texts written to a test on two prompts where one of the prompts selected has the possibility of generating more emotion terms and more evaluations compared to a prompt where it is possible to answer with just descriptions.

A concordance software was used to list the 119 selected search words with context in an alphabetical list. Enough contexts were provided for the words to be further categorised as metaphorical (or not) with the same categorisations as above. Then these metaphorical expressions were grouped into conceptual metaphors and compared.

7 Findings

The prototypical text written by a learner of Norwegian living in Norway on the topic *Friendship* in the ASK corpus is a narrative text with reflective parts. It deals with some friends the writer used to have that either turned out not to be such good friends after a while or the contrary, i.e. that they became even better friends after they had been apart. In conclusion, the learner reflects over how important it is to have at least one good friend or how s/he misses having a good friend when living in Norway. Hence, the topic is a universal one (Ahlgren & Magnusson, this issue). A prototypical text about Norwegian nature is a descriptive text, and it describes the different seasons. If a narrative is included, it describes how difficult the learner found the cold to be in the beginning of his/her stay in Norway, and after some years, how pleased s/he is about the change in light, colours and temperature

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according to different seasons. In conclusion, the writer gives a tribute to Norwegian nature and hence adapts the texts to the typical Norwegian appraisal, thus constructing themselves as successfully integrated (Kahn, 2019).

As expected, many of the metaphorical expressions are related to the topic at hand. In the texts about friendship, several verbs were associated with manipulation of objects: a friend is something *you have, find, lose, lack, get, watch out for, change, support,* or *hurt*.[4] This object is mainly a valuable object, hence the conceptual metaphor in question is A RELATIONSHIP IS AN OBJECT, with the entailment A GOOD RELATIONSHIP IS A VALUABLE OBJECT. Other conceptualizations about friends in these texts relate to 'distance', friends are *close/near*; to 'attachment' (you are *linked to* friends, there are *ties between* friends), and the these might be *strong*. However, sometimes one might be *without* these friends (as with objects). In addition, 'obstacles might appear between friends, (*conflicts* between friends).[5] Subsequently, friends are framed as objects in the proximity of one another, but with the possibility of being separated by some negative entities. As with valuable objects, there are *real* friends, who are willing to *share the good and the bad.*[6]

Friendship is also presented as a state, through the expressions 'friends are something you *are'* or something 'you *become'* [7] giving rise to the metaphor FRIENDSHIP IS A STATE. Also, senses are used in describing friendship, in particular the activity of listening is viewed as having an *open ear*, and to understand the view of another is to see the world *through his eyes.*[8] In addition, there are metaphors related to other themes in the texts about Friendship, like 'life', 'time' etc. 'Life' is framed as a moving object, it *goes on,* takes *different roads*, and

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[4] In Norwegian: *å ha, finne, miste, mangle, få, passe på, støtte* or *såre* venner
[5] In Norwegian: *nær; knyttet til* dem; *bånd mellom* venner; *sterke* vennskap; *uten* venner; *konflikter mellom* venner;
[6] Norwegian: *ekte/virkelige/skikkelige* venner; de *deler godt og vondt.*
[7] Norwegian: vi *er* venner; dere *blir* venner.
[8] Norwegian: ha et *åpent øre*; se verden *gjennom øynene hans.*

it *lasts*, may *be saved*, and *has a value* and a certain composition (*consists* of music).[9] 'Life' is also seen as a container in which you locate *important/good things* or have located friends.[10] 'Time' is framed as something with a certain quality: days are *good and bad.*[11]

In the text about 'Nature*'*, metaphorical expressions are not used as frequently. It is mainly the topic, Norwegian nature, which is described metaphorically. As with the Friendship texts, where friends are seen as objects, it is nature that is framed as an object in the texts about Nature and this object belongs to the country (e.g. Norway *has* fine/fantastic/beautiful nature). Advice is also given on how to deal with the object, that you should *take care* of and *protect* and not *destroy* nature[12] pointing to the conceptual metaphor NATURE IS A VALUABLE COMMODITY. The senses are also used as source for the description and sometimes as evaluation of the scenery (e.g. You *see* nature, you can *enjoy* nature and *feel* nature).[13] Hence, the metaphorical expressions are instantiations of the conceptual metaphor TO EVALUATE IS TO USE THE SENSES. In addition, there are – as with the Friendship texts – conceptualisations related to distance (e.g. You might live *close to* nature). Additionally, nature might be one with the person, (e.g. to be *part of* nature) or nature is an object located together with the person, (e.g. nature has *an important place* in one's life).[14] Nature is also viewed as a container, with the person located inside it (e.g. you *are/live (out) in* nature, you *grow up in* nature).[15] Finally, nature is viewed as an event – you *experience* nature.[16] Some of the *Nature* texts also include some expressions about communication. Words are viewed as countable objects that have to be retrieved in order to communicate, like *find enough words* to express them [the feelings], *lack words* to describe Norwegian nature.[17]

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[9] Norwegian: *går videre*, *går andre veier*, *varer, kan reddes, har en verdi*; *består* av musikk.
[10] Norwegian: *seriøse/gode ting; ha* venner *i livet.*
[11] Norwegian: dagene er *gode og onde*.
[12] Norwegian: *passe på/ ta vare på* og *beskytte*; ikke *ødelegge* naturen
[13] Norwegian: Norge *har* fin/fantastisk/vakker natur; man *ser* naturen; kan *nyte* naturen; kan *føle* naturen
[14] (Norwegian: *i nærheten av* naturen; *del av* naturen; naturen har *en viktig plass* i livet
[15] Norwegian: *er/lever (ute) in* naturen; *vokser opp i* naturen
[16] Norwegian: *oppleve* naturen.
[17] Norwegian: *finne nok ord* til å beskrive dem; *mangle ord* for å beskrive

The texts about *Friendship* and *Nature* are both conceptualized as objects even if the expressions themselves vary. In the *Friendship* texts, there are also examples of learners writing about nature (e.g. like *a feeling/sense of unity* with nature, the *fantastic nature* of Northern Norway).[18] In the texts about *Nature*, friendship is also mentioned (as something you meet or as somebody you are *with*),[19] usually in a location. Hence, the texts on the two topics share the conceptual metaphor of X IS A VALUABLE COMMODITY, where in the texts about *Friendship* X is a friend and in the texts about *Nature,* X is Norwegian nature.

8 Discussions and Conclusion

This study shows that the two different prompts presented to the learners in a language test not only trigger different metaphorical expressions but also influence the amount of metaphor used. In the descriptors listed in the CEFR grading scales in Council of Europe (2001) regarding the descriptors at different levels, there was no mention of the use of metaphors as a criterion of proficiency. However, some mentions of the use of idioms were found at the C levels. An example is seen in the scale of "Vocabulary range" that is part of the section called "Communicative language competences" where the C2 level is described as "Has a good command of a very broad lexical repertoire including idiomatic expressions and colloquialisms*"* (Council of Europe, p. 112). Hence, the use of metaphors in written production is seen as belonging to texts on the higher end of the scale (Nacey, 2013).

Two different prompts were examined in the present study. The prompt "Write a text about friendship" not only invites the student to reflect and evaluate, but gives the students the opportunity to demonstrate a richer variety of types of metaphors. The reason for this is probably that the topic is about people (friends), asking at the same time for a reflection about an abstract concept - 'friendship'. Abstract topics are hard to explain without metaphors.

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[18] Norwegian: *følelse av enhet* med naturen; Nord-Norges *fantastiske* natur
[19] Norwegian: *treffe*; er *med*

People (including friends) have relations and relations may be good or bad, hence there are likely to be evaluations as well as emotions. Research has shown that emotion is one of the topics where metaphors appear very frequently (Kövecses, 2000). The prompt "Write a text about how you experience Norwegian nature" is different. When learners write about this topic, they might just stick to a descriptive text, writing only about concrete objects in nature. Evaluations are not obligatory even if there are possibilities to include both evaluations and emotions.

   A few words can be said about verbs with possible literal and metaphorical meanings, which can be found in texts written as answers to both prompts. Whereas the frequent transitive verbs *find, get, give* and *take* are mainly used metaphorically in the Friendship text (*take care of friends; to find friend a friend here is difficult*), in the texts about Nature they are either used less in metaphorical sense or used more in their literal sense. Traditionally, there seems to have been little focus on verb metaphors in education despite the rich opportunity verbs give to demonstrate the different literal and metaphorical meanings. According to Cameron (2008), verbs show more cross-linguistic variation. As Genter (1982, p. 325) has noticed, verbs "express relations between objects or people and seem to encode slightly different conceptual relationships in different languages". Verbs seem to be more flexible and their meanings are easily extended as demonstrated with the very frequent verbs (basic verbs) like *lose* and *find,* as well as other verbs like *lack* and *support* where a range of objects might be found as their arguments. A search through the top 100 verbs in the ICLE[20] (Granger & Paquot, 2009) also underscores the high number of verbs that might be used with a metaphorical meaning. However, to my knowledge, this is not considered in the L2 classroom. It seems natural to assume that a variety of verbs, including verbs used metaphorically, is welcomed by the evaluators when assessing learners' texts, hence, the texts

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[20] The Corpus used here contains over 3 million words of argumentative essay writing by high-intermediate to advanced EFL university students of 16 different L1 backgrounds.

will be marked higher, in contrast to texts containing just nuclear or basic verbs that are usually overextended in learner language (Viberg, 1993, 1998, 2012). As illustrated in this study, different prompts afford different opportunities for learners to use verbs, and other lexemes, metaphorically.

These insights relate to the use of corpora, which is an excellent way for researchers to document the actual use of metaphorical expressions, but the quality of the analysis is dependent upon the composition of the corpus. This insight into the relationship between topic and vocabulary is vital. The connection between the topic of the texts and the type of vocabulary readily available is also essential for second language students when they are being tested on their language level, in particular in writing assignments. This is especially true as raters pay more attention to language construction (including vocabulary) when evaluating essays than in oral tests, where pronunciation and fluency are more salient. One issue is how the topic is presented to test-takers and thus will affect their possibility of writing a text that will pass a certain level as judged by the examiners.

The L1 of the text writers could also be considered in further research. Influences from the L1 could potentially be found, either in the use of the metaphorical expressions themselves or in the associated conceptual metaphors that form the backdrop of the expression. Deignan (2008, p. 289) claims that "the salience of source domains and differences in the attitudes towards the source or target domains" in various cultures could also contribute to different groups favouring different metaphors. For example, Boers and Demecheleer (1997) found differences in the source domain of metaphor use in economic discourse in English, French and Dutch texts regarding 'health', 'path' and 'food'. Andersen (2000) compared metaphors used in German and Danish articles about business cycles and found the Danish articles contained only 2/3 of the amount in the German articles. Hence, we see a cultural difference, but whether this is transferred in students' L2 writing, is yet to be studied. However, Golden

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(2017) found a difference between the use of *emotion words* in the texts written by 45 adult learners of Norwegian, whose language backgrounds were Russian, German or Bosnian-Croatian-Serbian. The difference was explained to be due to the frequency of the expression in Norwegian and the similarity between words used to express the concept in the learners' L1 and Norwegian. There are reasons to believe that similar findings will be observed regarding metaphors.

The relationship between topic and metaphor needs to be more fully investigated, especially in the context of second language learning, and particularly to what extent the use of metaphors influences the grading given by test evaluators. But as learners do vary in their Norwegian proficiency, a further examination of the use of metaphorical expressions at different proficiency levels would shed light on this question. As Ruth & Murphy (1988) emphasised several years ago when discussing the effects of topics upon the student-writers and the teacher-raters, the topics need to be designed with great care "because they initiate and direct the act of writing that produces the sample for evaluation". This might be of importance as regarding the metaphorical expressions that emerge (and are evaluated) as well, and the caution certainly applies to the researchers' choice of data in vocabulary research.

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Appendix: An overview of the word families used metaphorically in the 20 texts that were read and of the search words that were used to extract metaphorical expressions in the rest of the texts about *Friendship* and *Nature* in the corpus.

Found in the text read about *Friendship*	English glossing	Found in the text read about *Nature*	English glossing	Found in both text types	English glossing	Supplement	English glossing
bånd	*band*	benytte	*use*	finne	*find*	dø(d)	*dead*
betydningsfull	*significant*	beskytte	*protect*	fordel	*advantage*	fast	*fixed*
blomst	*flower*	bra	*good*	få	*get*	fjern	*distant*
bort	*away*	fantastisk	*fantastic*	gi	*give*	ha	*have*
dårlig	*bad*	finne	*find*	gå	*go*	hente	*catch*
del(e)	*part*	først	*first*	løse	*solve*	leve	*live*
drøm(me)	*dream*	frisk	*fresh*	mangle	*lack*	lukke	*close*
etablere	*establish*	full	*full*	møte	*meet*	løs(e)	*loose*

forbilde	*model*	grunn	*ground*	nær	*close*	motta	*receive*
forhold	*relation*	hel	*whole*	spennende	*exiting*	myk	*soft*
fullkommen	*perfect*	høre	*hear*	ta	*take*	sende	*send*
god	*good*	klar	*clear*			svak	*weak*
hard	*hard*	klare	*manage*			sår	*wound*
hjerte	*heart*	lang	*long*			uviktig	*unimportant*
knytte	*tie*	lei	*sad*				
kreve	*require*	løsning	*solution*			albu	*elbow*
legeme	*body*	merke	*mark*			arm	*arm*
lett	*easy*	morsom	*fun*			bein	*bone*
lettelse	*relief*	passe	*care*			finger	*finger*
liv	*life*	ren	*clean*			hand	*hand*
mål	*goal*	side	*side*			hals	*neck*
miste	*loose*	skift(ende)	*change*			hode	*head*
nød	*distress*	stor	*big*			kald	*cold*
ond	*evil*	støtte	*support*			kinn	*cheek*
oppgave	*task*	styre	*control*			kne	*knee*
oppstå	*occur*	treffe	*meet*			leppe	*lip*
råd	*advice*	trist	*sad*			mage	*stomach*
sammen	*together*	våkne	*waken*			munn	*mouth*
skaffe	*obtain*	vant	*used (to)*			nakke	*neck*
sterk	*strong*	vokse	*grow*			nese	*nose*
streve	*struggle*	ødelegge	*destroy*			panne	*forehead*
sår(e)	*wound/hurt*					rygg	*back*
type	*type*					svelge	*swallow*
ulempe	*disadvantage*					tygge	*chew*
umulig	*impossible*					tå	*toe*
uten	*without*					varm	*warm*
vanskelig	*difficult*					øre	*ear*
verdt	*worth*					øye	*eye*
viktig	*important*						
åpen	*open*						

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Anne Golden is a professor em. of Norwegian as a Second Language and core member of the Center of Multilingualism in Society across the Lifespan (MultiLing), a center of excellence at the University of Oslo, Norway. Her main research is on literacy in a second language, with a focus on vocabulary and in particular metaphors, studying learners' comprehension, development and practice in and out of school. Transfer studies have been a recurrent research theme, using corpus methods and the Norwegian learner corpus ASK. Identity negotiations among migrants are also part of her research using narratives and metaphors as research tools.