A preliminary study of metaphor use by Hong Kong university students

Li Lan

Department of English, Hong Kong Polytechnic University
eglilan@polyu.edu.hk

Abstract

Metaphoric competence – the knowledge of and ability to use metaphor appropriately and effectively – contributes to all aspects of communicative competence, and is therefore 'highly relevant to second language learning, teaching and testing.' (Littlemore & Low, 2006: 268). This paper reports an investigation into the use of metaphor by Hong Kong university students who are advanced learners of English. There were two parts to the study: data mining of a learner corpus which comprised communicative and argumentative writing, and analysis of a metaphor elicitation test. The discussion focuses on the frequency and types of conceptual metaphors produced in different contexts. It is argued that students' metaphoric competence should be enhanced because metaphors can make communication more effective and impressive.

Key words: metaphor, cognitive ability, linguistic competence, ESL/EFL

1. Introduction

Metaphoric meaning arises from the interaction between words and their discourse context. Most metaphor studies have focused on identifying, describing and explaining metaphorical language in published and professional discourses such as politics, business, and education. For example, Charteris-Black (2005) analysed the political speeches of Winston Churchill, Martin Luther King, Margaret Thatcher, Tony Blair and the Bushes. Results showed that figurative language was used frequently with about six metaphors produced in every hundred words. Metaphor mapping revealed conceptual metaphors of journey, health, morality, life, death, and animals. Chateris-Black argued that metaphor plays an essential role in the persuasiveness of political rhetoric, that it contributes to the construction of political identity, and that without it 'politicians would lack hallmarks of charismatic leadership such as passion, energy and conviction' (Charteris-Black, 2005: 198). The use of metaphor as a tool for persuasion has also been identified in business discourse (e.g., Elwood, 1995; Rohrer, 1995; Boers, 1997; Clancy, 1999; Li & Bilbow, 2000; Henderson, 2000; Koller, 2004). A number of figurative expressions are frequently used. For example, money transfers constitute *cash flow*, new firms are *infant companies*, firms may *collapse*, banks may *sink*, stock markets may *crash*, economic forecasts may be *gloomy*, and currencies may be *weak*, *strong* or *stable* (Henderson, 1986; Boers, 1997; Eubanks, 1997; Li & Bilbow, 2002, 2004; Koller, 2004). Metaphors are also frequently encountered in educational discourse. For example, teaching and learning have been described as *gardening, a journey, scaffolding, mining,* a *bridge* and *movement of water* (Munby, 1986; Cortazzi, 1991, Scott, 1994; Cortazzi & Jin, 1999; Cameron, 2003).

Metaphor is not a linguistic peculiarity restricted to specialized discourse, however, but is pervasive throughout language (Lakoff & Johnson, 1980; Cameron & Low, 1999; Deignan, 2005) because it is inextricably intertwined with thought. On the one hand, metaphors 'allow us to think about and organise chaotic reality' (Gannon 2001: 1) and can be used as a linguistic device to express difficult-to-talk-about abstract concepts in terms of concrete entities (Lakoff, 1993; Lakoff & Johnson, 1980). On the other hand, 'metaphor influences our beliefs, attitudes and values' (Charteris-Black 2005: 13). Furthermore, experimental research suggests that exposure to certain metaphors can improve cognitive reasoning ability (Gentner & Gentner, 1983), increase understanding of certain concepts (Smith, 1995), and develop critical thinking

(Boers, 1997). This is perhaps because metaphor comprehension requires cognitive effort to link the target and source domain (Cortazzi & Jin, 1999: 154). Metaphor is therefore a fundamental component of overall language proficiency, a potentially useful educational tool, and of considerable relevance for second language learners. However, although a number of studies have identified, described and explained metaphorical language in published discourse, little research has considered the use of metaphor by ESL/EFL learners.

Chateris-Black (2002: 114) proposed a six-type cross-linguistic metaphor classification system which takes account of a metaphor's surface linguistic structure, the underlying concepts which are expressed, and whether the metaphor is culture specific (opaque) or universal (transparent). Table 1 shows the six types. Such a model is useful in ESL/EFL research because for second language learners linguistic, conceptual and cultural differences in metaphor use between their first (L1) and second (L2) languages may result in inappropriate cross-linguistic transfer (Deignan, Gabrys, & Solska, 1997; Irujo, 1986). Alternatively, learners may avoid using words metaphorically in their L2. For example, two small scale studies investigating English language use in a free composition exercise by Italian (Danesi, 1995) and Malay (Chateris-Black, 2002) second language learners of English showed that the metaphors used were those which could be directly translated (both linguistically and conceptually) from the learners' L1.

Table 1. Cross-linguistic model for metaphor use (source: Chateris-Black, 2002: 114)

Category	Linguistic form	Conceptual basis
Type 1	=	=
Type 2	~	=
Type 3	=	#
Type 4	#	=
Type 5	#	# + transparent
Type 6	#	# + opaque

= equivalent; # different; ~ similar

In recent years metaphor research has been dominated by the cognitive linguistics approach, which is underpinned by the assumption that language reflects thought. Two levels of metaphor can be distinguished: conceptual metaphors and linguistic metaphors. The term 'conceptual metaphor' is used to refer to a connection between two semantic areas at a cognitive level. ANGER is HEAT is a conceptual metaphor reflecting the cognitive connection that seems to exist between anger and fire for speakers of many languages (Lakoff 1987). The target (ANGER) is the conceptual domain that is the focus of the investigation; the source (HEAT) is the conceptual domain from which metaphorical expressions can be drawn. Linguistic metaphors are the linguistic realizations of a conceptual metaphor. In the case of ANGER is HEAT, one example is 'She's got a *fiery* temper'. A specific aim of cognitive linguistics is the analysis of linguistic metaphors to make inferences about underlying conceptual metaphors which are then used to make inferences about thought (Cameron & Low, 1999: 18). The approach relies largely on researcher intuition, using examples as necessary which are often decontextualised. Although cognitive linguistics has had a significant influence on metaphor theories (e.g., Gibbs, 1994; 1992; Kittay, 1987; Lakoff, 1987; Lakoff & Johnson, 1980), critics argue that metaphor must be considered in its natural context (e.g., Cameron, 1999, Deignan, 2008). Importantly, the use of single examples can result in important generalizations being missed or in the formation of mistaken assumptions that selected examples of metaphor

accurately reflect all aspects of metaphoric language (Gibbs 2000: 30).

Corpus linguistics is the study of authentic language in context. The approach enables claims about language use to be made from real-life data rather than relying on intuitions which are unreliable (Sinclair, 1991; Teubert, 2005: 1) or on data that is experimentally elicited in psycholinguistic studies and which may be atypical (Deignan, 2008). Computerised methods for data analysis have contributed to its position as one of the most useful and popular methodologies within applied linguistics.

By incorporating both quantitative and qualitative analyses, corpus linguistics offers a way to investigate students' spontaneous metaphor use and to compare metaphor use between different text types. Metaphors can be described in terms of their frequency, proportion (relative to literal use), collocations, underlying concepts, and semantic prosody (whether the metaphor conveys a positive or negative meaning in context).

The aim of the present research is to investigate Chinese students' English metaphor use by analyzing the spontaneously produced metaphors in a corpus of learner English, and the metaphors produced in a metaphor elicitation test.

2. Research methodology

There were two parts to the current research. In the first part a corpus approach was used to examine spontaneously produced metaphors in different types of student writing. The second part was a metaphor elicitation test.

2.1. Investigating spontaneously produced metaphors

2.1.1. Learner written corpus
The learner corpus used in the project was from the PolyU Language Bank, a collective database consisting of various texts collected between 1999 and 2005 by staff members in the Department of English at the Hong Kong Polytechnic University. Two types of writing were considered, argumentative and communicative. The argumentative writing totals 780,300 words and includes essays for writing competitions, travelogues, and creative pieces. The communicative writing totals 1,080,000 words and largely comprises simulated business letters and memos, minutes and reports. It also includes samples of student MSN messages and blogs.

2.1.2. Corpus analysis
The analysis broadly followed the three stages of Critical Metaphor Analysis (Cameron 2003): identification, interpretation, and explanation. The writing was initially examined qualitatively to identify metaphors commonly used to describe integral aspects of students' university lives. These metaphors were then mapped according to their source domain – the concepts that they reflect.

For the purposes of the present study 15 words with potential metaphoric meaning were then identified for further quantitative analysis. The words were examples of Goatly's (1997) 'general reifying', 'specific reifying' and 'personification' metaphors. Examples included nouns representing entities, verbs realizing states and process, adjectives representing the properties of entities, and adverbs representing the properties of processes. A wordlist was generated from the corpus and lemmatized. The word list was searched for the presence of the 15 key words, and then the Key Word in Context (KWIC) method was used to judge whether the words were used

metaphorically. It is important to evaluate the metaphoricity of words in context because metaphoric meaning can only be established through an interaction between the word and its context. For example, when 'grow' collocates with abstract nouns such as 'knowledge', 'crime rate', and 'sales', it is metaphoric. When the agent is a living entity, such as 'flower', 'plant', and 'children', 'grow' typically conveys a literal meaning, although children's growth is sometimes metaphoric. The phrasal verb 'grow up' may convey a literal or a metaphoric meaning.

2.2. Investigating experimentally elicited metaphors

The second part of the study was conducted to investigate how metaphors reflect students' thinking about various topics, using a paradigm which has been previously used (Cortazzi & Jin 1999). Four target words were selected for inclusion in the experiment: 'internet', 'computer', 'learning' and 'teacher'. 'Internet' was specifically selected because it has become an integral part of modern day human life, but yet the nature of the World Wide Web is unfamiliar to most people (Ratzan, 2000). Previous research has documented internet metaphors used pervasively by the on-line community and discussed how they help users' understanding of the internet. The other three words also reflect important aspects of university life. A group of 201 Hong Kong University students (151 BA students; 50 MA students) were asked to complete sentence stems of the following format:

The TARGET is _____ because _____.

Students were encouraged to produce metaphors. The metaphors which were produced were mapped according to their source domain – the concepts that they reflect.

3. Results and discussion

3.1. Discussion of findings of spontaneous metaphor use

The qualitative analysis of the learner corpus revealed that students produced both dead and creative metaphors. Dead metaphors are those which have been used so frequently over time that their meaning has been assimilated into language so that the transferred meaning is not present and not considered by the language user. Dead metaphors include metaphoric clichés. Active metaphors convey incongruity between a focus term and its surrounding discourse. Students used metaphor to describe a number of different aspects of their academic lives. Table 2 shows examples.

Table 2. Examples of metaphors produced spontaneously to describe different aspects of academic life.

TARGET DOMAIN	SOURCE DOMAIN	Examples
INTERNET	JUNGLE/SEA	network, surf
LEARNING	JOURNEY	start, end, milestone, bridge, passport, pave the way
UNIVERSITY	HOME/FAMILY	brother, sister, parents
	HUMAN BODY	head, heart, hand, arm, brain
UNIVERSITY LIFE	WEATHER	cold, hot, storm, sunshine

| KNOWLEDGE | SEA | get lost, drawn, sail |
| STUDENT | PLANT | grow, root, cultivate, seed, branch, harvest, blossom |

Students used personification to provide a concrete and accessible framework for certain descriptions. For example, 'university' was described as 'a brother', 'a sister', and as 'parents'. Personification was also used to help students convey emotion towards that entity. For example:

(1) *I consider every meeting has its good and evil side.*

In addition to metaphoric personification, students also used personification in similes – comparisons that show how two things that are not alike in most ways are similar in one important way – to make their writing more interesting and entertaining. For example:

(2) *To me, Shanghai sounds familiar yet strange; it is like a face covered with a veil.*
(3) *Actually, the city is like a beauty.*

The learner corpus was examined for the presence of 15 potential metaphors, selected *a priori* as examples of Goatly's (1997) 'general reifying', 'specific reifying' and 'personification'. Table 3 shows the occurrence of the 15 target words in the two types of writing. The frequency of literal and metaphoric uses of the metaphoric candidates differs between the types of writing. For example, 'deep' as a metaphor occurs more frequently in communicative than in argumentative writing. Literal uses of 'deep' can be observed in communicative writing, but metaphoric uses are more common. In argumentative writing 'deep' always occurs with a metaphoric sense.

Table 3. Comparison of the occurrence of the 15 target words in communicative and argumentative writing, shown as overall frequency, and the frequency and proportion of times that the word is used metaphorically.

Word	Word frequency		Frequency with which word is used metaphorically		Proportion of times word is used metaphorically (%)	
	Communicative (780,300 words)	Argumentative (1,080,000 words)	Communicative (780,300 words)	Argumentative (1,080,000 words)	Communicative (780,300 words)	Argumentative (1,080,000 words)
bridge	18.0	20.0	0.0	5.0	0.0	25.0
core	7.0	12.0	3.0	12.0	42.9	100.0
cultivate	7.0	6.0	6.0	6.0	85.7	100.0
dance	8.0	2.0	1.0	2.0	12.5	100.0
deep	41.0	28.0	37.0	28.0	90.2	100.0
flavour	8.0	3.0	1.0	2.0	12.5	66.7
flaw	3.0	4.0	3.0	4.0	100.0	100.0
flow	38.0	22.0	35.0	20.0	92.1	90.9
grow	46.0	56.0	22.0	26.0	47.8	46.4
handle	46.0	152.0	45.0	152.0	97.8	100.0
hole	6.0	2.0	1.0	2.0	16.7	100.0
journey	63.0	15.0	2.0	2.0	3.2	13.3
root	30.0	5.0	30.0	5.0	100.0	100.0
shape	15.0	4.0	1.0	1.0	6.7	25.0
war	7.0	12.0	2.0	0.0	28.6	0.0

Observation of the table shows that students did use many of the 15 target words metaphorically. For example, they described knowledge in terms of 'growth', they referred to 'core' issues, they discussed 'handling' a problem, and they considered 'flaws' in plans. However, differences were observed in the use of metaphor between the two types of writing, as can be seen with the example of 'core'. Figures 1 and 2 show the concordance of 'core' in the two types of writing. In communicative writing, 'core' was used metaphorically less than half of the time (Figure 1, lines 1, 2, and 3), whereas in argumentative writing 'core' always occurred with a metaphoric sense (Figure 2).

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N Concordance
1        drug abuses among young people will be the core issue. Firstly, 'club drugs' would be defined.
2   In general, the members of public perceive that the core tasks of the police are arresting criminals and
3   be sexually aggressive. Those who watched ¡®soft-core¡¯ pornography were less likely to engage in
4    suggested the entrance area near the Library and core DE, FG as well. Miss Chan and Pricilla both
5   is due to the time for students to walk from core to core. Amber Choi disagreed that some of them were
6        is due to the time for students to walk from core to core. Amber Choi disagreed that some of
7   being one of them. Staring at the cruciform-shaped core with hollow center, we were amazed by the
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Figure 1. Concordance of 'core' in communicative writing.

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N Concordance
1    improve their English. University students usually take their core subjects more important to Language subjects as the
2     the weighting of language subjects and not as high as the core subjects for departments other than language learning
3       there are too much workload. They have to deal with the core subjects that related to their future jobs, if there are an
4    Kong. Most of them may just concentrate more time on the core subjects but neglect the communication languages ---
5    employers. Students¡ focus will be changed not only to the core subjects but also English --- international language.
6       difficulties to some graduates¡ study. Their result of the core subject may be affected by the exit test. In my opinion, I
7     students already have a great pressure on studying their core subject, it is crude to put them on a hotty pan. Actually,
8    I think it is better to keep using English. It is because the core purpose for studying is find a good job. Using English,
9      of several issues. An interview done by a team of health core professionals found that half of women in Hong Kong
10        business. For the States, it has already become the core of business in the world. It is inevitable for the countries
11   That means the students is able to spend more time in the core of the subject rather than to look up at the dictionary
12          especially after its entry into WTO. That means the core of international business world should be shifted from
13    English. And many textbooks are written in English. The core of the question is that people have already thought
14     foreign companies are attracted to locate their businees core in Hong Kong, especially in logistic and finacinal sector
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Figure 2. Concordance of 'core' in argumentative writing.

A number of researchers have studied universality and cultural specificity of metaphors (e.g., Eubanks, 1997; Cameron & Low, 1999; Cortazzi & Jin, 1999). Analysis of the 15 words reported in the paper did not reveal any specific influence of the Chinese culture on English metaphoric use. However, previous analyses of business metaphors in Hong Kong have demonstrated an influence of culture on the metaphoric use of body parts and colour terms (Li & Bilbow, 2004). Future work with the present corpus will therefore analyse a larger set of words which includes body parts and colour terms in the two types of writing.

3.2. Discussion of findings from the metaphor elicitation experiment

Table 4 shows the results from the metaphor elicitation experiment. Responses for the targets have been grouped into clusters according to the source domain of the elicited metaphor. Many different metaphors were produced by the 201 students for each of the targets. Metaphor mapping demonstrates the use of various source domains, which reveals the ways in which the targets were conceptualized by the students.

Table 4. Number and percentage of students producing metaphoric descriptions for each of the targets, and the reasons. Results are grouped according to the source domain of the metaphor (the underlying conceptualization).

TARGET DOMAIN	SOURCE DOMAIN	Reason	Frequency	Percentage
INTERNET	NICE PERSON	helpful, supportive, obedient	22	11.0
	BAD PERSON	cheating, unreliable	3	1.5
	SOURCE OF KNOWLEDGE	informative, including all	43	21.4
	TOOL	useful and efficient	6	3.0
	LINK	connecting people worldwide	11	5.5
	BODY OF WATER	vast amount of information, easily drawn	23	11.4
	DRUG	can be helpful and harmful	8	4.0
	CONTAINER	including too much stuff	8	4.0
	JUNGLE	confusing, hard to find something	4	1.9
COMPUTER	NICE PERSON	helpful, knowledgeable, obedient	81	40.3
	FRIEND	ready to help	17	8.5
	EVIL PERSON	making trouble, harmful	7	3.5
	BRAIN	clever, informative	14	7.0
	DRUG	captivated, addicted	14	4.5
	CONTAINER	spacious, cramped	7	3.5
	TOOL	versatile	8	4.0
	HUMAN BODY	indispensable, useful	11	5.5
LEARNING	JOURNEY	long, endless	27	13.4
	ROAD	having to go step by step	8	4.0
	SPORTS	competitive, exciting	18	8.9
	INVESTMENT/BUSINESS	getting what is paid for	15	7.5
	LIFE	in different stages	14	6.9
	COOKING	mixing ingredients	7	3.5
TEACHER	BOOK	knowledgeable	24	11.9
	FRIEND	ready to help	10	4.9
	LIGHT	leading the way	25	12.4
	FAMILY	showing care, closeness	23	11.4
	CARETAKER	considerate	14	6.9
	AUTHORITY	tough control	4	2.0
	GARDENER	growing plants	13	6.5
	ANIMAL	hardworking	6	3.0
	BOSS	bossy	4	2.0

Following the conceptual mapping, the metaphors were additionally grouped according to whether they conveyed positive or negative meanings. The responses to 'internet' were both positive and negative. The positive responses included:

1. The internet as a PERSON: *teacher, guide, friend, doctor, assistant*
2. The internet as a SOURCE OF KNOWLEDGE: *encyclopedia, Wikipedia, book, dictionary*
3. The internet as the WORLD: *universe, world, globe*
4. The internet as a TOOL: *tool, screw driver, wireless phone*
5. The internet as a LINK: *link, hook, net, bridge*
6. The internet as a BODY OF WATER: *sea, ocean, pool*

The negative responses included:
1. The internet as a BAD PERSON: *monster, big liar*
2. The internet as a DRUG: *drug, poison, virus, poisonous, addictive, infectious, suffering*
3. The internet as a CONTAINER: *rubbish bin, dust bin, dye vat*
4. The internet as a JUNGLE: *puzzle, maze, jungle*

Metaphors were classified according to Chateris-Black's (2002) model (see Table 1). Most of the elicited metaphors of internet were of Type 1 meaning that the same conceptual metaphor and an equivalent linguistic expression exist in Chinese. The examples are INTERNET as BRAIN, as NET, as SEA, as JUNGLE, as BRIDGE and ADDICTIVE.

An example of a Type 3 metaphor is TEACHER as COW, which has also been observed in previous research (Cortazzi & Jin, 1999). The connotations of 'cow' in Chinese are commitment, devotion, hardworking and asking nothing in return and it is therefore used positively as a description of a teacher. However, in western culture 'cow' may mean slow, old-fashioned and unenergetic and is used as an insult.

An example of a Type 6 metaphor, meaning that both the concept and linguistic expression are different in Chinese is 'dye vat' which was used by one student to describe the internet: '*the internet is a dye vat because its stuff has bad influence on children*'. The source domain *dye vat* (*rangang*, 染缸) is a high-frequency metaphor used in the Chinese language. A google search resulted in 562,000 hits and few of them refer to the literal meaning of dying cloth in a big vat. To Chinese people, the metaphor has negative connotations which can be transferred to the entertainment business, society, the internet, and blogs. However, the use of 'dye vat' as a metaphor is not part of Western culture. Other examples of Type 6 metaphors are descriptions of TEACHER as CANDLE, as LADDER, and as STEPPING STONE. These metaphors convey the way in which teachers' dissemination of knowledge requires self sacrifice and lack of regard for personal gain. The metaphor reflects the Chinese cultural value of placing greater importance on society as a whole rather than on the individual, and demonstrates how the cultural background of students can impact on their linguistic constructions in a second language.

4. Conclusions

Hong Kong Chinese students have little difficulty expressing concepts metaphorically in English, at least when explicitly asked, although there was some indication of interference of the Chinese culture. The variety of metaphors produced in the elicitation experiment demonstrates students' ability to use English figuratively when specifically encouraged and indicates that students do have metaphoric awareness. Conceptual mapping of the metaphors offer some insight into the way particular objects are conceptualized. Furthermore, the findings from the metaphor elicitation test are compatible with the possibility that the low metaphorical use in spontaneous writing is not a result of a lack of metaphorical understanding, but reflects a failure to utilize metaphoric awareness in production.

Students' metaphoric competence should be enhanced by incorporating metaphor training into second language teaching. Possible training methods include engaging students in tasks such as the experimental metaphor elicitation test reported in the present paper. With an increased metaphoric awareness students' spontaneous use of metaphor is expected to increase, which should enhance the effectiveness of their writing.

Future work will examine spontaneous metaphor use in more depth and investigate elicited metaphors produced in context. In addition, the use of metaphor by Hong Kong students will be compared with those produced by native English speakers, as well as those produced by Mainland Chinese students. This will enable more informative claims to be made about students' competence and may reveal more about the influence of linguistic, conceptual and cultural differences between students' L1 and L2 on their metaphor production in a second language.

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