Effects of Collocation Information on Learning Lexical Semantics for Near Synonym Distinction

Ching-Ying Lee*,+ and Jyi-Shane Liu#

Abstract

One of the most common lexical misuse problems in the second language context concerns near synonyms. Dictionaries and thesauri often overlook the nuances of near synonyms and make reference to near synonyms in providing definitions. The semantic differences and implications of near synonyms are not easily recognized and often fail to be acquired by L2 learners. This study addressed the distinctions of synonymous semantics in the context of second language learning and use. The purpose is to examine the effects of lexical collocation behaviors on identifying salient semantic features and revealing subtle difference between near synonyms. We conducted both analytical evaluation and empirical evaluation to verify that proper use of collocation information leads to learners' successful comprehension of lexical semantics. Both results suggest that the process of organizing and identifying salient semantic features is favorable for and is accessible to a good portion of L2 learners, and thereby, improving near-synonym distinction.

Keywords: Lexical Semantics, Near-synonym Distinction, Lexical Collocation Behavior.

1. Introduction

One of the most common lexical misuse problems in the second language context concerns near synonyms. Near synonyms are lexical pairs or sets that have very similar cognitive or denotational meanings. Dictionaries and thesauri often overlook the evaluative distinctions among near synonyms and 'end up showing certain circularity' in providing semantic meaning (Tognini-Bonelli, 2001). L2 learners are left with individual judgment and preference in lexical choices of almost synonymous words. Near synonyms, however, may vary in

^{*} Department of English, National Taiwan Normal University, Taipei, Taiwan

⁺ Department of Applied Foreign Languages, Kang Ning Junior College, Taipei, Taiwan E-mail: chingying.lee1212@gmail.com, cylee@knjc.edu.tw

[#] Department of Computer Science, National Chengchi University, Taipei, Taiwan E-mail : jsliu@cs.nccu.edu.tw

collocational or implicative behavior (Partington, 2004). Among a group of nearly synonymous words, some may indicate favorable conditions while others refer to unfavorable situations, and some may show approval while others imply disapproval. These subtle distinctions between near synonyms are not easily identified and may never be acquired by L2 learners.

Lexical use is an area where L2 learners frequently demonstrate a number of errors. Many L2 learners rely on dictionaries and thesauri to provide denotational meaning of a lexical item without being aware of the subtle implications embedded in contexts. Implicit knowledge of lexical items is not easily taught. Semantic infelicities due to inappropriate lexical use leads to miscommunication and unfavorable social consequences. Therefore, misuse of lexical items, particularly among near synonyms, calls for more attention and treatment in L2 lexical learning.

The purpose of this research is to explore the potential of applying computerized linguistic resources and observing collocation behaviors in semantic learning for near synonym distinction. We propose a categorized collocation profile with graded association strength to filter and organize salient semantic features. It serves as a guided process to help develop concrete conceptual links so semantic meaning and unique features of lexical items become more easily accessible to L2 learners. Both analytical evaluation and empirical evaluation are performed to examine the effects of collocation information on near synonym distinction. Observations and implications in regards to L2 semantics learning are described.

2. Literature Review

Knowledge of the appropriate contextual use of the particular languages' resources is a crucial component of linguistic competence (Barron, 2003). L2 learners often face difficulties in understanding subtle and elusive nuances of appropriateness (Dewaele, 2008). The task of making proper lexical decisions between near synonyms is particularly challenging for L2 learners and requires adequate semantic competence. It is inadequate to only know a word meaning or definition. A core lexical competence is characterized by appropriateness of word choices, particularly between near synonyms.

The idea of using collocation information to observe the word sense has been developed in post-Firthian corpus linguistics. The relevant studies investigate how a lexical item functions to convey semantic meanings, or how it carries out its discursive or evaluative properties (Sinclair, 2003; Channell, 2000; Stubbs, 2001; Partington, 2004). L2 learners should be aware that lexical meanings cannot be determined only by semantics. Therefore, it is helpful to examine the effects of collocation information on lexical meaning and functions.

According to Stubbs, 'there are always semantic relations between node and collocates

and among collocates themselves' (2001). The collocational information is interpreted through the proximity of a consistent series of collocates (Louw, 2000). Its main function is to convey the speaker or writer's attitude or evaluation. According to priming theory, Partington (2004) indicates that a person has a set of mental rules in the priming process, combined with the mental lexicon, of how items should collocate. In addition, the process by which lexical items are primed in one's mind is highly contextually dependent. The corpus linguistic techniques for lexical collocation provide a distinctive way to study semantic profiles.

The problem of near synonym distinction and appropriate lexical choice is especially daunting for second language learners (Mackay, 1980). The majority of vocabulary errors made by advanced language learners reflect learners' confusion among similar lexical items in the second language. The language of explanations in dictionaries is somewhat arcane such that it becomes limited in accessibility and usefulness in practical L2 contexts. Martin (1984) discussed instructional approaches to synonym teaching and suggested the importance of providing common collocates to students. With the availability of computerized corpora, recent research has exploited concordances and collocation data for advising L2 learners in lexical choice (Yeh, *et. al.*, 2007; Chang, *et. al.*, 2008). Through enquiry into the interplay between lexical semantics of near synonyms and their collocation information, this study provides analytic and empirical observations and contributes to reducing L2 learners' confusion of sophisticated lexical connotations and applications.

3. Methodology

Corpus-based approaches to applied linguistics assert that lexical semantics can be revealed by study of a large corpus. The analysis of the corpus uses computational techniques to identify words that typically co-occur with a lexical item under investigation. Our study attempts to understand the potential of adopting corpus linguistics for the purpose of improving learners' performance in lexical semantics. In particular, we focus on investigating the effects of lexical collocation information on near-synonym distinction in either the self-learning or the classroom context.

Recent developments in concordancing tools include web-based systems that provide online access to query and retrieval. Both Sketch Engine (Kilgarriff, *et. al.*, 2004) and VIEW (Davies, 2008a) are powerful tools for corpus-based language research. Research issues concerning lexical behavior, collocational pattern, syntax, and semantics can all be facilitated by the language data access capability and the statistical summarization functions of these state-of-the-art concordancing tools. For the purpose of exploring the potential of lexical collocation information for semantic grounding and synonym distinction, we adopted VIEW as the concordancing tool in our study and used it to retrieve collocation information based on its access to two large corpora, BNC (Burnard, 1995) and COCA (Davies, 2008b).

The notion of collocational profile is proposed to provide an organized description of collocation behavior. Collocates are grouped by POS categories and graded by association strength with a keyword. The statistical measure chosen to gauge association strength in the study was the mutual information (MI) measure (Church & Hanks, 1990). The MI measure compares the probability of two words occurring together through intention with the probability of the two words occurring together by chance. Higher MI scores indicate strong association between two words. An MI score greater than 2 can be considered high enough to show a substantial association between two words. The MI measure, however, has been known to unduly overvalue infrequent words. The list of words considered in the collocational profile is restricted to the top 20 with the highest frequency of occurrence and has a minimum number of 5. These adjustments have allowed us to partly offset the drawbacks of MI measure.

For transitive verbs such as *affect/influence*, we focus on the basic syntactic pattern of S (subject noun) +V (transitive verb) + O (object noun) and a few extended patterns, such as Adv (adverb) +V + O, and V + Adv + O. Words that meet the constraints of POS tags and occurrence positions with respect to the keyword (transitive verb) are retrieved by VIEW and classified into three categories: subject collocates, object collocates, and adverb collocates. The positional constraint for subject collocates is the left horizon of the keyword within a span of five words. Object collocates must be immediately before or after the keyword.

When the list of most frequent collocates is retrieved, the collocates are further graded by their MI scores. Collocates with MI scores higher than 5.5 are graded as dominant collocates. Collocates with MI scores lower than 3.5 are graded as moderate collocates. Those in between are graded as strong collocates. The grade order of dominant, strong, and moderate indicates the decreasing strength of association between the collocates and the keyword. The POS categorization and the graded association strength of collocates provide a profile that highlights the significant semantic links and illustrates the interactive network of semantic meaning. This will help enhance a concept map of the keyword where semantic features become more recognizable and synonym distinction is clarified.

Figure 1 is a screenshot of VIEW with BNC, where collocation information for the keyword *affect* was retrieved. The search string portion specifies the targeted collocation constraint as the adverb (POS) occurring in the span of one word in both directions (left and right) of *affect* as verb. The upper right portion of the window shows the search result, which is a list of collocated adverbs sorted by MI value. This constitutes the lexis list and MI-BNC value in the collocational profile of *affect*, as shown in Table 3. The complete collocation profile of a keyword is constructed by multiple uses of VIEW with various collocation constraints and corpora.

🎒 British National Corpus (BYU-BNC) - Mozilla Firefo 檔案 E 編輯 E 檢視 (Y) 歴史 (S) 書籤 E) 工具)					_0
💽 - C 🗙 🏠 🗋 http://corpus.byu.edu		,				• Google	
最常激覽的網站 🌒 Windows Media 🌒 Windows 🎒 発		3 marrage					
British National Corpus (BYU-BNC)	Huà nonnan						
BYU-BNC: BRITISH N	ATIO	NAL	CORPUS				
Mark Davies / Brigham Young							
ISPLAY	SEE CO	NTEXT: CLIC	CK ON WORD OR SELECT WORDS + [C	ONTEXT]			[HELP
SLIST ○CHART ○KWIC ○COMPARE			CONTEXT	тот 🗖			
EARCH STRING	1		ADVERSELY	121	417	29.02	11.53
WORD(S) affect.[v*]	2		MATERIALLY	12	224	5.36	9.09
CONTEXT [av*] 1 M	3		PROFOUNDLY	11	601	1.83	7.54
POS LIST adv.ALL	4		RADICALLY	8	769	1.04	6.73
RANDOM SEARCH RESET	5		SIGNIFICANTLY	40	4172	0.96	6.61
ections 🔲 show	6		INDIRECTLY	8	1038	0.77	6.29
I IGNORE	3	-					3
SPOKEN SPOKEN FICTION	H	ELP: SEARC	H SYNTAX		Mor	e information	
NEWSPAPER ACADEMIC MISC	UP	DATED SEPT	EMBER 2009				
ORTING AND LIMITS	5	yntax	Meaning	Examples (Click to run)	Sample match	hes	
SORTING RELEVANCE MUT INFO	0	ne "slot" :	Make sure there is no space, or it will b	e interpreted as two consecutive words			
MINIMUM FREQUENCY M S	2	One "slot" : Make sure there is no space, or it will be interpreted as two consecutive words word One exact word mysterious mysterious					
LICK TO SEE OPTIONS				Access /			
		osi os*ii	Part of speech (exact) Part of speech (wildcard) [More information]	[vvg] [v*]	walking, talking swim, swims, s	l wam, swimming	
http://corpus.byu.edu/bnc/help/syntax_e.asp							
att						- 0 ²	

Figure 1. Screenshot of VIEW providing collocation information.

4. Evaluation

Two sets of tests are conducted to explore and verify the effects of collocation information on lexical semantics acquisition and near synonym distinction. In the first test, we walked through the process of producing a collocational profile, acquiring semantic features, and illuminating semantic distinction between near synonyms. The purposes were performing an objective analysis on the effects of collocational profiles in leading to a clear description of semantic features and allowing comparative induction that reveals subtle semantic differences between near synonyms. The second test involved a written test and survey given to a group of recruited test subjects. The purpose was to solicit language learners' actual experience and observe the effects of collocational profiles on language learners' performance in near synonym distinction tasks. By conducting both analytical and empirical verification, we hoped to achieve a sound investigation to better understand the extent to which collocational profiles can help reveal semantic distinctions of near synonyms to L2 learners.

4.1 Analytical Verification

The near-synonyms, *affect* and *influence*, were chosen for the study based on the degree of difficulty for L2 learners and their fitness in serving as a representative lexical semantics learning task. Dictionary definitions given by Merriam-Webster are: *-affect*, 1. to act upon; to

209

produce an effect or change upon; 2. to influence or move, as the feelings or passions; *-influence*, 1. to control or move by power, physical or moral; 2. to affect by gentle action, to exert an influence upon. Webster's New Dictionary of Synonyms gives the following discrimination: *-affect*: 1. always presupposes a stimulus powerful enough to evoke a response or elicit a reaction; 2. implies a definite alteration or modification; *-influence*: always presupposes an agent that moves a person or thing in some way or to some degree from a course, or effects changes in nature, character, or behavior. Unfortunately, these abstract

affect					influence				
type	lexis	MI	MI		type	lexis	MI	MI	
• •		-BNC	-COCA		• •		-BNC	-COCA	
dominant					dominant	factor	6.29	6.21	
	factor	4.92	5.02			variable		5.12	
strong	variable		4.22			government	5.00		
strong	disease	(3.07)	3.68	strong		ability	3.57	3.78	
	decision	(3.34)	3.61						
	condition	2.36	3.32	-		attitude		3.44	
	issue	2.73	3.02			behavior		3.37	
	policy	2.17	2.73			decision	2.81	2.22	
	matter	2.59			moderate	culture		2.61	
moderate	behavior		2.46		moderate	policy	2.08	1.89	
	change	2.42	2.12			teacher		1.92	
	action		2.29			process	1.99	1.81	
	problem	1.66	1.91			experience		1.90	

Table 1. Comparison of subject collocates of near-synonyms (affect, influence).

explanations of discrimination are confusing to most L2 learners and do not provide definite

Tables 1, 2, and 3 show comparisons of subject, object, and adverb collocates of *affect* and *influence*. Collocational profiles seem to provide contextual evidence that can be used by L2 learners to derive grounding features for concrete discrimination. The following observations were made based on comparison of collocations: 1. The subject of *affect* seems to be a stimulus that would evoke changes, while the subject of *influence* tends to be physical or abstract entity that has power to cause changes. 2. Objects' status changes accomplished by *affect* seem to be more obvious for recognition, while changes caused by *influence* are more related to some inner status. 3. The listed adverbs are all dominant collocates, indicating the manner of making changes is an important parameter of semantic features of the two near-synonyms. 4. The manner of making changes in *affect* seem to be related to the magnitude of effects, while the extent of control is the focus in describing changes done by *influence*. 5. The association of *adversely* with *affect* is outstanding with MI scores higher than 11. *Affect* also has a unique collocate of *severely* and the stronger association of *negatively* than *positively*. These are compelling evidence to the unfavorable (negative) prosody of *affect*.

clarification.

Effects of Collocation Information on Learning Lexical Semantics for Near Synonym Distinction

Overall, we derived the following distinction based on collocational profile evidence. *Affect* implies mostly negative impact or disturbance caused by a strong stimulus. *Influence* assumes some entity that has a power to exert subtle control over the object.

	affect			influence				
type	lexis	MI -BNC	MI -COCA	type	lexis	MI -BNC	MI -COCA	
dominant				dominant	government	5.50		
	life	5.42	(2.75)		outcome	5.39	5.39	
	outcome		4.76		perception		5.37	
	ability	(3.38)	4.12		behavior	5.11	4.97	
	performance	(3.27)	4.11		decision	4.48	4.90	
	behavior	3.70	3.61	-	attitude	4.82	4.64	
strong	quality	(2.37)	3.69	strong	life	4.29		
					policy	3.56	4.14	
					opinion	4.07		
					choice	3.90	3.71	
					direction	3.61		
	decision	2.83	3.30		development	3.03	3.48	
	health	2.58	3.02					
	rights	2.93						
moderate	relationship		2.73	moderate				
	policy	1.58	2.35					
	development	1.60	2.32					

Table 2. Comparison of object collocates of near-synonyms (affect, influence).

Table 3. Comparison of adverb collocates of near-synonyms (affect, influence).

affect				influence			
type	lexis	MI	MI	type	lexis	MI	MI
		-BNC	-COCA			-BNC	-COCA
	adversely	11.53	11.87		unduly	7.74	9.25
	negatively		9.36		profoundly	8.84	8.63
	materially	9.09			greatly	7.54	8.26
	profoundly	7.54	7.97		positively	(5.00)	8.17
	positively		7.77		strongly	7.98	8.05
dominant	radically	6.73		dominant	heavily	7.19	7.66
	significantly	6.61	6.63		negatively		7.60
	indirectly	6.29	7.23		indirectly		7.03
	seriously	5.78	4.92		significantly	5.75	6.35
	dramatically	5.33	5.72		deeply	6.34	5.85
	directly	5.29	6.26		directly	(4.95)	5.68

4.2 Empirical Verification

We constructed a set of ten test questions concerning contextual lexical choice of *affect* and *influence*. Each test question was composed of an independent sentence in which one of the near synonyms is the intended component as a verb and the test part is highlighted as a lexical choice between the near synonym pair. For example, how did your past experiences **affect** or **influence** the way you coped with changes? Test subjects were asked to decide which of the two near-synonyms was the correct lexical use in the sentential context.

The same test questions were administered to the subjects in three phases with different contexts. In phase one, the subjects answered the test questions with L1 translation of the near-synonyms and their own lexical recognition. In phase two, the same set of test questions were given to the subjects with L2 denotation of the near-synonyms from two dictionaries, one being an English-English dictionary (the Merriam-Webster's), denoted as D1, and the other being a dictionary of synonyms (Webster's new dictionary of synonyms), denoted as D2. After answering the test questions, subjects were asked their opinion of whether each type of dictionary was useful in distinguishing the near-synonyms and making the correct lexical choice. In phase three, collocation information of the near-synonyms was provided and the same set of test questions were used again. At the end of the test questions, subjects were asked to indicate whether collocation information was useful in near-synonym distinction. The full questionnaire is shown in the Appendix. The test subjects recruited were 40 English-major freshmen at a top-tier university in Taiwan. The test was taken in a self-learning context.

	Test Score	Confidence		Usefulness
subjects'	6.25/10	4.3/10	dictionary	52.5% (21/40)
recognition	(1.63)	(3.09)	ulctionaly	32.3% (21/40)
with	5.53/10	6.48/10	synonym	42.5% (17/40)
dictionaries	(1.63)	(3.04)	dictionary	42.3% (17/40)
with	6.15/10	5.9/10	collocation	67.50((27/40)
collocation	(1.73)	(3.22)	profile	67.5% (27/40)

Table 4. Overall test results of "affect/influence" distinction.

Table 4 shows the summarization of the group performance and overall effects of additional semantic information with respect to the task of near-synonym distinction. We make the following observations.

1. The subjects scored 6.25 points (out of 10) on average in making the correct lexical choices between *affect* and *influence* with a standard deviation of 1.63. The lexical decisions were deem confident only 4.3 times (out of 10) on average with a standard deviation of 3.09. The performance in making correct lexical choices is not particularly satisfactory. The low confidence level also indicates noticeable difficulty perceived by the subjects. More than half of the test questions were answered without confidence.

213

- 2. When dictionary definitions were provided for consultation, the subjects scored lower (from 6.25 to 5.53) than the phase one test with self lexical recognition. Nevertheless, confidence levels in performing the task show a considerable increase (from 4.3 to 6.48). The performance degradation in phase two seems to indicate that dictionary consultation for *affect* and *influence* does not result in better understanding and seems to bring difficulty to subjects' near-synonym recognition. Yet, the subjects made lexical choices with higher confidence and seemed to not be aware of the newly-created misuse. This reveals a significant problem in the near-synonym self-learning context. A considerable portion of language learners may not be capable of using L2 dictionaries for successful near-synonym distinction and may perceive inaccurate lexical knowledge.
- 3. The effects of providing collocation information seem to be positive in the near-synonym distinction task. In the phase three test, the subjects became more cautious (5.9 vs. 6.48) on potential lexical misunderstanding but scored better (6.15 vs. 5.53) than the phase two test with dictionaries. Although the test score does not show improvement over the phase one test with subjects' self lexical recognition, the lexical decision was made with higher confidence (5.9 vs. 4.3), indicating the subjects did gain useful information from the collocational profile for distinguishing the near-synonyms.
- 4. The subjects' perception of the usefulness of additional semantic information seems to be consistent with the test scores. The subjects perceived the lowest usefulness (42.5%) in the distinction task with dictionaries, which were fittingly accompanied by the lowest test score (5.53). More than two-thirds (67.5%) of the subjects perceived the collocational profile as useful information in near-synonym distinction.

The empirical study reveals that language learners do experience difficulty in near-synonym semantic recognition. The problem should be brought to the attention of language teachers and needs to be addressed adequately. The overall test results support the positive effects of collocation information on near-synonym semantic distinction. Both the test scores and the subjects' perception show meaningful enhancement in better understanding of lexical semantics. The positive effects are not as evident in difficult near-synonyms, and this can be logically expected. Some collocation information for distinguishing similar semantics may not be obvious to language learners. This indicates that the positive effects of collocation information on near-synonym semantic recognition may be greatly improved by pedagogical instruction over self-learning for most language learners.

5. Discussion and Conclusion

With both analytical and empirical verification, we show that collocation observation is useful in recognizing semantic features of a word of interest. Syntactic patterns and POS categories provide a structure for anchoring and characterizing the semantic links between collocates and

the target word. The scale of collocate association strength helps distinguish salient semantic features that are conducive to L2 learners' comprehension of the target word. When the target word is a transitive verb, the collocational profile of subject, object, adverb, and adjective collocates with graded association strength serves as an effective instrument in revealing the semantics and improving learners' recognition of the target word. The collocational profile also provides analytical evidence for L2 learners in comparing and discriminating near-synonyms. In self-learning with dictionary consultation, L2 learners are often briefed by abstract definition and left with vague and shallow lexical recognition. Collocational profiles, together with denotational meaning in dictionaries, give a solid conceptual grounding of target word for L2 learners in getting full grasp of the lexical semantics.

In this study, we used VIEW as a concordancing tool, to retrieve collocation information related to the targeted words for investigation. Our position is not to design and develop a new system that outperforms current concordancing tools, such as VIEW and SKETCH ENGINE. Instead, we attempt to point out that there is a gap between L2 learners' proficiency and the powerful investigative functions provided by these concordancing tools. We addressed the problem of how the linguistic resources and the computational functions, as provided by current concordancing tools, can be further built upon to benefit L2 learners.

We proposed a categorized collocational profile with graded association strength to filter and organize salient semantic features. It serves as a guided process to help develop concrete conceptual links such that semantic meaning and unique features of lexical items becomes more easily accessible to L2 learners. The process of constructing collocational profiles that we manually simulated on top of VIEW can be automated by a computer program and can be potentially developed as an online lexical query instrument for L2 learners in pedagogical and self-learning contexts. The development of such a software system, however, is not within the scope of the paper.

Lexical misuse has been a tenacious problem for generations of L2 learners. Most L2 learners are unaware of the subtle semantic distinctions among near-synonyms. The approach we propose can potentially fill in the gap for improving L2 learners' lexical recognition and reducing semantic infelicities. We conducted analytical evaluation to simulate L2 learners' cognitive standpoint and performed the process of deriving insightful semantic information from target words' collocational profiles. We also carried out an empirical evaluation to observe the response from actual language learners and verify that proper use of collocation information leads to learners' successful comprehension of lexical semantics. Both results suggest that the process of organizing and identifying salient semantic features is favorable for and is accessible to a good portion of L2 learners. In addition, pedagogical instruction, as an enhancement to the use of a collocational profile, may benefit an even larger portion of L2 learners.

Acknowledgments

The authors would like to thank Prof. Miao-Hsia Chang of NTNU for her research advice and Prof. Huei-Ling Lai of NCCU for her assistance in questionnaire administration. Anonymous reviewers' comments also helped improve the content of the paper.

Reference

Barron, A. (2003). Acquisition in interlanguage pragmatics. Amsterdam: Benjamins.

- Burnard, L. (1995). British National Corpus: User's reference guide for the British National Corpus. Oxford: Oxford University Computing Service.
- Chang, Y. C., Chang, J. S., Chen, H. J., & Liou, H. C. (2008). An automatic collocation writing assistant for Taiwanese EFL learners: A case of corpus-based NLP technology. *Computer Assisted Language Learning*, 21(3), 283-299.
- Channell, J. (2000). Corpus-based analysis of evaluative lexis. In S. Hunston & G. Thompson (Eds.), *Evaluation in Text* (pp. 38-55). Oxford University Press.
- Church, K. W., & Hanks, P. (1990). Word association norms, mutual information, and lexicography. *Computational Linguistics*, 16(1), 22-29.
- Davies, M. (2008a). VIEW. Available online at http://view.byu.edu/.
- Davies, M. (2008b). The Corpus of Contemporary American English: 385 million words, 1990-present. Available online at http://www.americancorpus.org.
- Dewaele, J. (2008). Appropriateness in foreign language acquisition and use: Some theoretical, methodological and ethical considerations. *International Review of Applied Linguistics in Language Teaching*, 46(3), 245-265.
- Kilgarriff, A., Rychly, P., Smrz, P., & Tugwell, D., (2004). The Sketch Engine. In *Proceedings of the Eleventh EURALEX International Congress*, 105-116. Lrient.
- Levinson, S. (1983). Pragmatics. Cambridge: Cambridge University Press.
- Louw, B. (2000). Contextual prosodic theory: Bring semantic prosodies to life. In C. Heffer, H. Sauntson & G. Fox (Eds.), *Words in Context: A Tribute to John Sinclair on his Retirement*. Birmingham: University of Birmingham.
- Mackay, S. (1980). Teaching the syntactic, semantic, and pragmatic dimensions of Verbs. *TESOL Quarterly*, 14, 17-26.
- Marin, M. (1984). Advanced vocabulary teaching: The problem of synonyms. *The Modern Language Journal*, 68, 130-137.
- Partington, A. (2004). Utterly content in each other's company: Semantic prosody and semantic preference. *International Journal of Corpus Linguistics*, 9(1), 131-156.
- Sinclair, J. (2003). *Corpora for lexicography*. In Sterkenberg, P. Van (Ed.), A Pactical Guide to Lexicography. Amsterdam: John Benjamins.
- Stubbs, M. (2001). Text, corpora, and problems of interpretation: a response to Widdowson. *Applied Linguistics*, 22(2), 149-172.

215

Tognini-Bonelli, E. (2001). Corpus linguistics at work. Amsterdam: John Benjamins.

Yeh, Y., Liou, H. C., & Li, Y. H. (2007). Online synonym materials and concordancing for EFL college writing. *Computer Assisted Language Learning*, 20(2), 131-152.

217

Appendix. Questionnaire

Part I. Circle the word which is appropriate for the context of the sentence.

Both "affect" and "influence" are translated as 影響 in Chinese and both are used as **verb** in the following sentences.

1.	How did your past experiences affect or influence the way you	□ sure	\Box not sure
	coped with changes?		
2.	Environmental issues continue to <u>affect</u> or <u>influence</u> us all.	□ sure	\Box not sure
3.	It's going to <u>affect</u> or <u>influence</u> the quality of the lives of people	\Box sure	\Box not sure
	in Taipei.		
4.	We believe that the culture and language of individualism <u>affect</u>	□ sure	\Box not sure
	or <u>influence</u> these trends.		
5.	Price and easy availability heavily <u>affect</u> or <u>influence</u> consumers'	\Box sure	\Box not sure
	choices.		
6.	Local networks have more power to <u>affect</u> or <u>influence</u> public	□ sure	\Box not sure
	opinion than any other media.		
7.	The amount and type of fat that you eat can <u>affect</u> or <u>influence</u>	□ sure	\Box not sure
	the health of your heart.		
8.	A market leader's actions may greatly <u>affect</u> or <u>influence</u> the	\Box sure	\Box not sure
	industry structure.		
9.	They could severely <u>affect</u> or <u>influence</u> the success or failure of	□ sure	\Box not sure
	the program.		
10.	The party can heavily <u>affect</u> or <u>influence</u> the political agenda.	□ sure	\Box not sure

Part II. Given the dictionary definitions of the two words, circle the word which is appropriate for the context of the sentence.

Dictionary 1

affect

- 1. to act upon; to produce an effect or change upon
- 2. to influence or move, as the feelings or passions

influence

- 1. to control or move by power, physical or moral
- 2. to affect by gentle action, to exert an influence upon

Dictionary 2

affect

- always presupposes a stimulus powerful enough to evoke a response or elicit a reaction
- implies a definite alteration or modification

influence

• always presupposes an agent that moves a person or thing in some way or to some degree from a course, or effects changes in nature, character, or behavior

1.	How did your past experiences <u>affect</u> or <u>influence</u> the way	\Box sure	\Box not sure
	you coped with changes?		
2.	Environmental issues continue to <u>affect</u> or <u>influence</u> us all.	□ sure	\Box not sure
3.	It's going to <u>affect</u> or <u>influence</u> the quality of the lives of	□ sure	\Box not sure
	people in Taipei.		
4.	We believe that the culture and language of individualism	□ sure	\Box not sure
	<u>affect</u> or <u>influence</u> these trends.		
5.	Price and easy availability heavily affect or influence	□ sure	\Box not sure
	consumers' choices.		
6.	Local networks have more power to <u>affect</u> or <u>influence</u> public	□ sure	\Box not sure
	opinion than any other media.		
7.	The amount and type of fat that you eat can \underline{affect} or	□ sure	\Box not sure
	influence the health of your heart.		
8.	A market leader's actions may greatly <u>affect</u> or <u>influence</u> the	□ sure	\Box not sure
	industry structure.		
9.	They could severely <u>affect</u> or <u>influence</u> the success or failure	□ sure	\Box not sure
	of the program.		
10.	The party can heavily <u>affect</u> or <u>influence</u> the political agenda.	□ sure	\Box not sure
你長	是否能解讀 Dictionary 1 進而區別 affect 與 influence? □	yes 🛛 1	10
你長	是否能解讀 Dictionary 2 進而區別 affect 與 influence? □	yes 🗆 1	10

Part III.

搭配主詞		搭配副詞		Verb	搭配受詞	
相同	不同	相同	不同		相同	不同
factor	disease	profoundly	adversely		life	ability
variable	condition	greatly	materially		outcome	performance
decision	matter	directly	differentially	affect	behavior	relationship
policy	change	indirectly	disproportio	anect	decision	rights
behavior	problem		nately		policy	
					development	
factor	governme	profoundly	unduly		life	perception
variable	nt	greatly	deeply		outcome	attitude
decision	ability	directly	strongly	influence	behavior	direction
policy	attitude	indirectly	significantly	mnuence	decision	
behavior	teacher				policy	
	process				development	

Given the collocations of the two words, circle the word which is appropriate for the context of the sentence.

1.	How did your past experiences affect or influence the way you	\Box sure	\Box not sure
	coped with changes?		
2.	Environmental issues continue to <u>affect</u> or <u>influence</u> us all.	\Box sure	\Box not sure
3.	It's going to <u>affect</u> or <u>influence</u> the quality of the lives of people	□ sure	\Box not sure
	in Taipei.		
4.	We believe that the culture and language of individualism <u>affect</u>	□ sure	\Box not sure
	or <u>influence</u> these trends.		
5.	Price and easy availability heavily <u>affect</u> or <u>influence</u> consumers'	□ sure	\Box not sure
	choices.		
6.	Local networks have more power to <u>affect</u> or <u>influence</u> public	□ sure	\Box not sure
	opinion than any other media.		
7.	The amount and type of fat that you eat can <u>affect</u> or <u>influence</u>	□ sure	\Box not sure
	the health of your heart.		
8.	A market leader's actions may greatly <u>affect</u> or <u>influence</u> the	□ sure	\Box not sure
	industry structure.		
9.	They could severely <u>affect</u> or <u>influence</u> the success or failure of	\Box sure	\Box not sure
	the program.		
10.	The party can heavily <u>affect</u> or <u>influence</u> the political agenda.	□ sure	\Box not sure
搭四	記詞資訊是否有助於區別 affect 與 influence? □ yes □	⊐ no	

219

Ching-Ying Lee and Jyi-Shane Liu