Development of Phonemic Awareness in the Poetry Sequence: A Case Study on French EFL Learners

Qianhong Jiang[a*], Michel Favriaud[a], André Tricot[b]
[a]Lab of LLA-Creatis, University of Toulouse-Jean Jaures, Toulouse, France
[b]Work and Cognition Lab., University of Toulouse-Jean Jaures, Toulouse, France
*Corresponding Author: flyawayiris@gmail.com

Abstract

This paper aims to find out the influence from poetry learning on pupils' phonemic awareness in the context of English as a foreign language in France. Theories of metalinguistic awareness and cognitive poetics are applied as the theoretical framework. A pre-test and a post-test are conducted on French pupils before and after the poetry sequence in English lessons, with a questionnaire as a feedback following the finished sequence. As the French pupils are the beginners of English learning, phoneme identification test has been conducted. Paired samples t-test, correlation and a scatter plot are employed with the software SPSS to analyzed the data, in order to answer both research questions. It is shown that series activities in poetry sequence help increase pupils' phonemic awareness; whereas pupils' learning gains of phonemic awareness and part of their feedback on poetry sequence are not correlated. With the findings, the development of phonemic awareness and the possible reasons on the un-correlation are further discussed based on the theory of cognitive poetics and metalinguistic awareness.

Key words: phonemic awareness, English as a foreign language, poetry, cognitive poetics

Introduction

Features of poetry such as repetition, meter, rhyme, assonance, and alliteration are usually used to achieve mystical, musical, or incantatory effects. Meanwhile, poems often make deliberate use of imagery, word association and sound qualities. Poetry in a foreign language "can be effective for the development of language awareness and ability" (Widdowson,1992: 85). Hanauer (Hanauer,2001: 77) points out that "the relevance of poetry for applied linguistics" has been closely related to the topic of "how second languages are acquired, learned, and taught". Although poetry shares a position with other forms of literature in foreign-language education(Chen,2009: 50), poetry is unique from other literary genres because of the choice of the right words, the rhythms, the sounds of languages, and the devices of poetry which are the media of expression. What's more, poetry appeals to our imaginations, our emotions and our ideals(Chen,2009: 51).

Poetry is organized by two kinds of syntax—standard sentence syntax, and "plural syntax" (Favriaud, Escuillié and Panissal,2008). Favriaud concludes that four

different factors correlate with each other: 1) the poem as a whole (Meschonnic,1989, 1995), 2)the line, 3) the sentence, and 4) a kind of "moving unit" based on serial prosody and repetition of the same phonemes and rhymes (Dessons and Meschonnic,1998).Even though young pupils cannot understand completely these four components in syntax, they might aware more or less features when reading poems (Favriaud, Escuillié and Panissal,2008). In this way, it is possible for pupils to aware the phonemes which repeat or rhyme in poems in a foreign language when they are learning a foreign language. To investigate how poetry influences the pupils on their phonemic awareness in the foreign language learning, theories of cognitive poetics and phonological awareness are proposed in this study.

Theories and Literature review:

Cognitive poetics is "an interdisciplinary approach to the study of literature employing the tools offered by cognitive science"(Tsur,2008: 1). Cognitive science as an umbrella which covers diverse disciplines—cognitive psychology, artificial intelligence, psycholinguistics and other branches of linguistics; it explores human information processing, involves the acquisition, organization and use of knowledge. From the perspectives of cognitive science, cognitive poetics investigates how human information processing shapes or constrains poetic language and form.

From the perspective of researcher Tsur who studies the cognitive poetics, speech sounds have two facets: a stream of acoustic cues, and a stream of phonetic units which are groups of distinctive features (Tsur,2008: 6). At the speech-end of various levels of linguistic activities, the acoustic signal is appropriate for transmission, while the phonetic representation is suitable for storage in short-term memory. These two levels of speech sounds convert one to the other(Tsur,2008: 6), involving complex recoding and finally forming the "speech code". Tsur also finds the relation between phonetic properties of the speech-sounds and poetry(Tsur,2008: 9): some phonemes such as the liquids and nasals (/l/ and /m/) are statistically positively correlated with tender poems and negatively with aggressive ones in various languages; whereas the voiceless stops such as /t/ and /k/ are positively correlated with aggressive poems and negatively correlated with tender ones. This can be explained in terms of a delay in recoding or restructuring from acoustic cues to phonemes.

Rhyme, as a distinct linguistic element, contributes to the musicality of poetry. The study of the sound stratum of poetry focuses on perceptual phenomena rather than dealing with semantic. Thus it more or less involves gestalt theory. In some poems, only the ending of the last verse doesn't complete it when most stanzas follow a certain rhyme scheme, it will lead an unfulfilled sense of requiredness which is a gestalt term. "Requiredness is the demand that one part of the perceptual filed may have on the other." (Tsur,2003: 115). For example, the closure of the rhyme pattern is demanded to fulfil readers' expectation of the stability of the whole poem, when there is an uncompleted rhyme pattern at the end of it. It will shape a strong perceptual pattern when the rhyme pattern is conspicuous.

Phonological awareness is "a specific metalinguistic ability…corresponds to that

of identifying the phonological components in linguistic units and intentionally manipulating them" (Gombert,1992: 15). Phonemic awareness, a part of phonological awareness, refers to the ability to examine language regardless of meaning and to manipulate its component sound elements (Cunningham,1988). That is , it is the ability to hear and manipulate phonemes which are the smallest part of a spoken language(Tankersley,2003: 1).

Changes in mental representation and attention to those mental representations which are becoming metalinguistic uses are attributed to two cognitive processing components: analysis and control(Bialystok,2001: 131). According to Bialystok, "first, analysis, is the ability to represent increasingly explicit and abstract structures; the second, control, is the ability to selectively attend to specific aspects of a representation, particularly in misleading situations."(ibid.)

In formal instructional contexts such as classroom setting, foreign language learners are exposed to limited authentic input. In such case, the development of their phonological awareness is likely to be impaired by their limited knowledge of the sound structure of that foreign language (Mora, Rochdi and Kivisto-de Souza,2014).

However, when learning a foreign language, beginners encounter some new phonemes which don't exist in their mother tongue. Consequently, their phonemic awareness is demanded in order to recognize the new linguistic sounds and even to compare them with those of their mother language.

The pronunciation of foreign language is related to its phonological awareness, which has been shown in varies researches and pronunciation instruction practices. Studies has demonstrated that activities of raising consciousness facilitate the development in some specific linguistic features of the foreign language: they contribute to the accuracy of specific phonemic pronunciation of the foreign language (Alves and Magro,2011; Saito,2012, 2013a; Saito,2013b, 2015); they are also helpful for the prosodic performance of the foreign language (Ramírez Verdugo,2006).On the other hand, the employment of consciousness-raising activities contributes as well to the foreign language pronunciation as a whole (Kennedy, Blanchet and Trofimovich,2014; Saito,2012; Wrembel,2005)

It is critical for children being capable to link phonemic awareness to their knowledge of letters (Adams,1990). Language users' perception and production of natural speech don't lead to conscious awareness on the phonological structure of the words, or the sequence of the small units of sounds in speech streams (McDowell and Lorch.,2008). Hence explicit awareness of phonemes emerges from the alphabetical literacy (Bruce,1964; Liberman et al.,1974). In other words, phonemic awareness emerges and develops out of the process in which learners try to match phonemes to units of alphabetic orthography. Thus, for the children whose mother language is transparent in the orthographical system, such as French, it is crucial for them to link their phonemic awareness to their new orthographical knowledge when they start to learn a foreign language (for example, English) in a less transparent orthographical system. That's the theoretical basis for the vowel identification task for the pupils in the present study.

Various tasks to access phonological awareness on the foreign language are mainly on how it is understood and operated. In some studies, for instance, the phonological awareness on the foreign language is accessed by asking participants to verbalise their awareness about the foreign language's pronunciation features(Kennedy and Trofimovich,2010). Other researchers treat phonological awareness on the foreign language as a synonym for the pronunciation competence of foreign language which are measured through listener's judgement (Mitrofanova,2012). Moreover, phonological awareness on foreign language is even explored through tests that conducted in studies on the phonological awareness on first language (Venkatagiri and Levis,2007).

Purpose

The study aims to find out the influence from poetry sequence as English course on pupils' phonemic awareness in the context of English as a foreign language in France.

Research questions

1. Does poetry sequence enhance pupils' phonemic awareness in the short-term course?
2. Does pupils' feedback on the poetry sequence (the relative part to this study) correlate to the result of their phonemic awareness task?

Method

Participants

French pupils (n=15) in the third year in primary school participated in this quasi-experiment. As the study was carried out in the classroom, not all variables can be controlled like in a laboratory. As result, a quasi-experiment has been carried out. All the pupils' mother language is not English. Almost all pupils don't speak English at home, except one pupil often speaks English with their parents as he stayed in the United States when he was in kindergarten, according to background survey to their parents.

The course

A poetry sequence has been carried out as the English course in the primary school for seven weeks. The pupils attended it twice a week in ninety minutes totally. Six poems were taught to them. When the teacher introduced a new poem to the pupils, she let them listen to it first, and then asked them to find out the words that they have already learnt which encouraged the pupils to engage more in it. Normally the pupils asked about the new words and the general meaning of the new poems. In order to lessen the pupils' confusion and anxiety on the new poems, the teacher explained in brief the new poems in French. When the pupils were more familiar to the new poem, the teacher guided them speak out the line of poem when they listened to each line, with claps on the beats according to the rhythm of the poem. Activities in the poetry sequence includes listening to the poem, copying the poem on the book,

role play, reading aloud as a performance in front of the class, and filling some new rhyming words in the already-learned poem (half-creation).

Materials and procedure

Most poems were picked according to the English level of pupils from various ways: poem books, the Internet and personal creation. All of them are modern poems which are designed for children to learn. One or two stanzas of long poems were picked out for pupils to learn.

A pre-test and a post-test were conducted on French pupils before and after the poetry sequence in English lessons, in order to examine the influence from the poetry sequence on pupils' phonemic awareness. As the French pupils were the beginners of English learning, vowel identification task has been conducted. Ten sets of words with underlined vowels were presented to pupils. In each set of words, two words are with a same vowel, while another word is with a different vowel. Pupils listened to the recording of the words twice a set with a pause of 5 seconds. They were required to select the word with a different vowel when they were listening. Test-retest reliability of the vowel identification task is 0.7, which is an acceptable reliability.

In order to investigate the relations between pupils' self-evaluation on their English poetry learning and the development of their phonemic awareness, a questionnaire on pupils' feedback on the poetry sequence as English course was also delivered. The questionnaire includes six perspectives of poetry learning to investigate the influence from them on English learning.

Data analysis

The result of pre-test and post test of vowel identification was analysed by paired samples t-test, to examine the influence from the poetry sequence on the foreign language learning. In order to find out the relation between pupils' comprehension of influence from the elements of poetry on foreign language learning and their actual development of phonemic awareness, correlation was also analysed between pupils' learning gains in the vowel identification task and their feedback on the poetry sequence.

Table 1 *Paired Samples Test on pre-test and post test*

Paired Differences								
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
MeanPreVowel - MeanPostVowel	-2.2667	1.9074	.4925	-3.3229	-1.2104	-4.603	14	.000
Pre-test[ɪ] and [iː]- Post test[ɪ] and [iː]	-3.333	4.880	1.260	-6.036	-.631	-2.646	14	.019
Pre-test[əʊ] and [ɒ]- Post test [əʊ] and [ɒ]	-5.333	6.399	1.652	-8.877	-1.789	-3.228	14	.006

Table 1 shows the general result and two sets of words which display significant differences in the paired sample t-test on pre-test and post test of the vowel identification task. The means of the results in the pre-test and post test are significantly different (Sig.=.000), with a mean difference (mean=-2.2667) between pre-test and post test, which shows that pupils have achieved a great significant progress of vowel awareness in the poetry sequence. Among ten sets of words, two sets show significant difference between the pre-test and post test (Sig.= .019 for the set of [ɪ] and [iː]; Sig.= .006 for the set of [əʊ] and [ɒ]). The mean differences of these two sets between the pre-test and post test are respectively -3.333 and -5.333. Since the mean differences is calculated by the way of "pre-test's results minus post test's ones", with the significant differences of the two sets of words, it is found that pupils also achieved a great significant progress of the vowel identification on [ɪ] vs. [iː], and [əʊ] vs. [ɒ] in the poetry sequence.

As mentioned above in the introduction part, acoustic signal and phonetic units convert into each other(Tsur,2008: 6). Accordingly, when pupils listen to the poems, they receive the acoustic cues which then transmit into phonetic units with distinctive features. Such phonemic representations are appropriate for short-term memory. When pupils are aware of the phonemic representations in the poems, the cognitive processing component "analysis" is happening. As the vowel identification task is designed to arouse phonemic awareness to discriminate the only different vowel in each set of words, the processing "control" is triggered with attention to the specific aspects of phonemic representation. Consequently, pupils formed certain phonological representations when they received the acoustic cues in the poetry sequence. According to the result of the vowel identification task, after the poetry sequence,

pupils have accumulated certain phonological representations and developed the phonemic awareness on certain vowels.

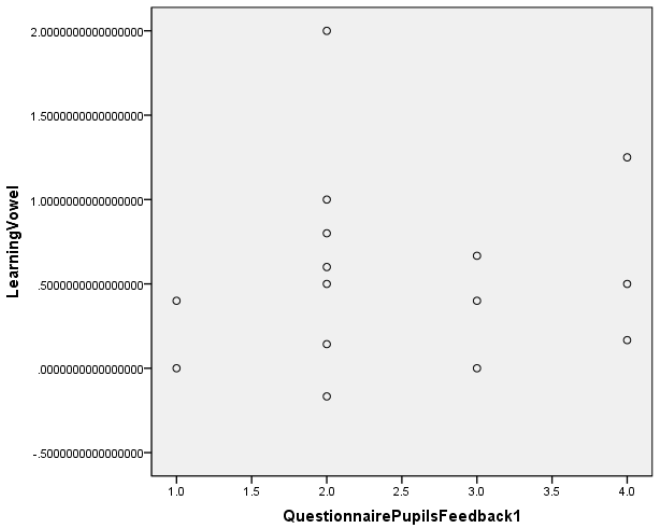
Since the first question in the questionnaire to pupils is on the pupils' evaluation on the contribution from rhyme of poetry on the pronunciation of foreign language learning which is related to the phonemic awareness as mentioned in the introduction part, correlation between pupils' learning gain of vowel identification and their feedback in question 1 was done as below (see table 2).

Table 2 *Correlation between learning gain of vowel identification and feedback of pupils question 1*

		Learning gain	Feedback1
Learning gain	Pearson Correlation	1	.083
	Sig. (2-tailed)		.767
	N	15	15
Feedback1	Pearson Correlation	.083	1
	Sig. (2-tailed)	.767	
	N	15	15

Table 2 shows that pupils' learning gain in the vowel identification does not correlate with the first question in pupils' feedback (Sig.=.0830, N=15).

Even though pupils have achieved significant progress in the vowel identification task after they completed the poetry sequence, not all the pupils think that the rhymes of poetry help them notice the pronunciation of English as a foreign language. For the purpose of learning further information of this situation, a scatter plot is formed to discover the relation between learning gain of vowel identification and results of the first question in pupils' feedback on the poetry sequence (see Graph1).



Graph 1 *Scatter plot of learning gain of vowel identification and results of question 1*

In graph 1, the highest score of learning gain is 2.0, while that pupil thinks that rhymes of the poems are only a little helpful (=2.0) for noticing the pronunciation of English. On the contrary, there is a pupil who rate the highest score (=4.0) in the first question of feedback while he/she only get a relative low score (=0.17) in the learning gain between the pre-test and post test. Indeed, he/she thinks rhymes of the poems is very helpful for him/her attend to the right pronunciation. However, he/she did not progress as much as the other two pupils who also rate it as very helpful. Another three pupils think the rhymes are only a little helpful to notice the pronunciation of English, with their scores of learning gains 1.0, 0.8, and 0.6, which are higher than those who think it very helpful/ helpful but achieved less progress (0.67, 0.5, 0.4, 0).

Discussion

It has been shown in table 1 that the poetry sequence has significantly helped increase pupils' vowel awareness in seven weeks. However, according to table 2, the scores of pupils learning gains in vowel identification task and one relative part of their feedback of poetry sequence do not correlate.

Why does such situation happen? Perhaps it is due to the delay of recoding between acoustic signals and phonemic representations. When the process of successive recoding is interfered by versification, the "capacity of retrieval" for the particular versified messaged increases, increasing the cost of cognitive economy of the system (Tsur,2008: 8). Such delay in recoding requires more of pupils' cognitive processing, which may lead that some pupils have an illusion of rhymes of poems being not helpful for noticing the pronunciation of English. For those pupils who think rhymes contribute to noticing the pronunciation but with less learning gain, they may have a more positive attitude towards poetry learning in the foreign language class. Poetry-based activities increase learner's motivation by eliciting emotional involvements (Lazar,1996). Moreover, emotion element such as attitude, feeling or affect is "a highly versatile device of information-holding, integration, orientation, and retrieval"(Tsur,2008: 18). That is, the emotion elements are possible to help pupils collect the fragments of information, even the phonemic ones, to integrate them into a coherent whole, and help pupils adapt themselves to them. Therefore, the situation that some pupils obtain good scores in learning gain but think rhymes do not contribute to the pronunciation is possible attributed to the delay of recoding between acoustic signals and phonemic representations, increasing the cognitive load. On the other hand, the opposite situation of those pupils just mentioned, is due to their positive emotions on the poetry learning in the foreign language.

Limitation and further research

This study was carried out in the classroom where many variables exist, while it is based on the real environment, which could be a relative real reference for other researchers. As this study is one part of the author's doctoral thesis, some background survey and interviews have done. However, they cannot be presented in one article in one time. The period of the poetry sequence is not enough because pupils only have ninety minutes for the English course every week, which causes the present data out

of the optimal prediction. The deduction of un-correlation between pupils learning gains of phonemic awareness and one part of their feedback of poetry sequence can be studied further in the future, with more devices to examine.

Conclusion

This study is conducted to examine the influence from poetry sequence on pupils' foreign language learning, and to find out the relation between pupils learning gains of phonemic awareness and one part of their feedback of poetry sequence, based on the theory of cognitive poetics and metalinguistic awareness. It has been shown that the poetry sequence has significantly helped increase pupils' vowel awareness in seven weeks. However, the scores of pupils learning gains in vowel identification task and one relative part of their feedback of poetry sequence do not correlate. A deduction for the possible reason in this situation is based on the delay of recoding between acoustic signals and phonemic representations in Tsur's theory of cognitive poetic.

Acknowledgement

This study is financially supported by Chinese government scholarship (CSC) as a part of doctoral thesis. The authors are grateful for the cooperation of Miss Ledieu, her pupils in CE2 and the parents.

References

Adams, Marilyn Jager. *Beginning to Read: Thinking and Learning About Print.* Cambridge: MIT Press, 1990. Print.

Alves, U. K., and V. Magro. "Raising Awareness of L2 Phonology: Explicit Instruction and the Acquisition of Aspirated /P/ by Brazilian Portuguese Speakers." *Letras de Hoje* 46 (2011): 71-80. Print.

Bialystok, Ellen. *Bilingualism in Development: Language, Literacy, and Cognition*. Bilingual Research Journal. Vol. 48: Cambridge University Press, 2001. Print.

Bruce, D. "The Analysis of Word Sounds." *The british journal of educational psychology* 34 (1964): 158-170. Print.

Chen, Rosa Hong. "Pedagogical Approaches to Foreign Language Education: A Discussion of Poetic Forms and Culture." *SFU Educational Review* 1 (2009): 49-57. Print.

Cunningham, A.E. "A Developmental Study of Instruction in Phonemic Awareness." *the meeting of the American Educational Research Association,*. American Educational Research Association, 1988. Print.

Dessons, G., and H. Meschonnic. *Traité Du Rythme: Des Vers Et Des Proses*. Dunod, 1998. Print.

Favriaud, Michel, C. Escuillié, and N. Panissal. "Poetry Reading and Writing for Enchancing Literacy in Less Proficient Readers of Five to Eight Years." *L1-Educational Studies in Language and Literature* 8.3 (2008): 81-101. Print.

Gombert, Jean-Emile. *Meatlinguistic Development*. The University of Chicago, 1992. Print.

Hanauer, D. "The Task of Poetry Reading and Second Language Learning." *Applied Linguistics* 22.3 (2001): 295-323. Print.

Kennedy, S., J. Blanchet, and P. Trofimovich. "Learner Pronunciation, Awareness, and Instruction in French as a Second Language." *Foreign Language Annals* 47 (2014): 79-96. Print.

Kennedy, S., and P. Trofimovich. "Language Awareness and Second Language Pronunciation: A Classroom Study." *Language Awareness* 19 (2010): 171-185. Print.

Lazar, G. "Exploring Literary Texts with the Language Learner." *Tesol Quarterly* 30.4 (1996): 773-775. Print.

Liberman, I., et al. "Explicit Syllable and Phoneme Segmentation in the Young Child." *Journal of Experimental Child Psychology* 18 (1974): 201-212. Print.

McDowell, Heather J, and Marjorie Perlman Lorch. "Phonemic Awareness in Chinese L1 Readers of English: Not Simply an Effect of Orthography. ." *TESOL Quarterly (Teachers of English to Speakers of Other Languages)* 42.3 (2008): 495-513. Print.

Meschonnic, Henri. *La Rime Et La Vie*. Lagrasse: Verdier, 1989. Print.

Meschonnic, Henri. *Politique Du Rythme, Politique Du Sujet*. Lagrasse: Verdier, 1995. Print.

Mitrofanova, Y. . " Raising Efl Students' Awareness of English Intonation Functioning " *Language Awareness* 21 (2012): 279-291. Print.

Mora, Joan C., Youssef Rochdi, and Hanna Kivisto-de Souza. "Mimicking Accented Speech as L2 Phonological Awareness." *Language Awareness* 23 (2014): 57-75. Print.

Ramírez Verdugo, Dolores. "A Study of Intonation Awareness and Learning in Non-Native Speakers of English." *Language Awareness* 15.3 (2006): 141-159. Print.

Saito, K. "Communicative Focus on Second Language Phonetic Form: Teaching Japanese Learners to Perceive and Produce English /ɹ/ without Explicit Instruction." *Applied Psycholinguistics* 36 (2015): 377-409. Print.

Saito, K. " Reexamining Effects of Form-Focused Instruction on L2 Pronunciation Development: The Role of Explicit Phonetic Information. ." *Studies in Second Language Acquisition* 35 (2013b): 1-29. Print.

Saito, K. . "The Acquisitional Value of Recasts in Instructed Second Language Speech Learning: Teaching the Perception and Production of English /ɹ/ to Adult Japanese Learners. ." *Language Learning* 63 (2013a): 499-529. Print.

Saito, K. . "Effects of Instruction on L2 Pronunciation Development: A Synthesis of 15 Quasi-Experimental Intervention Studies " *TESOL Quarterly* 46 (2012): 842-854. Print.

Tankersley, Karen *The Threads of Reading: Strategies for Literacy Development*. Association for Supervision & Curriculum Deve, 2003. Print.

Tsur, Reuven. *On the Shore of Nothingness : Space, Rhythm, and Semantic Structure*

in Religious Poetry and Its Mystic-Secular Counterpart : A Study in Cognitive Poetics Exeter : Imprint Academic, 2003. Print.

Tsur, Reuven. *Toward a Theory of Cognitive Poetics*. Sussex Academic Press, 2008. Print.

Venkatagiri, H.S., and John M. Levis. "Phonological Awareness and Speech Comprehensibility: An Exploratory Study." *Language Awareness* 16.4 (2007): 263-277. Print.

Widdowson, H.G. . *Practical Stylistics: An Approach to Poetry*. Oxford, UK: Oxford University Press, 1992. Print.

Wrembel, M. . "Phonological Metacompetence in the Acquisition of Second Language Phonetics." Poznan: Adam Mickiewicz University, 2005 Print.

Appendix: Sample of vowel identification task

Class:_____ Name:_____

For primary school

English Instruction: Choose the word with a different sound which is underlined in each group. Your teacher will read each group twice. For example: In the group: A. apple B. red C. dad, you choose B (red) because the sound underlined is different from others.

Consigne en français : Choisissez l'intrus dans chaque série selon le son que vous entendez. Chaque mot sera répété deux fois. Par exemple, dans le groupe A. apple B. red C. dad, tu choisiras B (red) car le ***son*** *souligné est différent des autres.*

Vowel identification: *Discrimination des sons vocaliques.*

				A	B	C
1	A. chip	B. please	C. sheep			
2	A. bed	B. have	C. head			
3	A. that	B. bath	C.dad			
4	A. honey	B. sun	C. floor			
5	A. good	B. cookie	C. food			
6	A. bear	B. here	C. hear			
7	A. day	B. have	C. cake			
8	A. nose	B. dog	C. not			
9	A. out	B. now	C. too			
10	A. sure	B.turtle	C. poor			