

# TASK TYPES AND ATTENTION ALLOCATION IN OUTPUT PROCESSING — A STUDY FROM THE PERSPECTIVE OF SELF REPAIRS

Chen Yaping

Beijing Foreign Studies University

## Abstract

This paper investigates the relationship between task types and the allocation of attention in second language learners oral output processing . It specifically focuses on self repairs which are the result of speech monitoring , a conscious process requiring attention . The oral production materials of 35 English majors in TEM 4 test in the Spoken and Written English Corpus of Chinese Learners are studied to find out the distribution of different types of self repairs made in three tasks retelling , monologue and dialogue . Results show an overall task type effect on self repair behavior , with retelling task prompting the learners to pay more attention to grammatical accuracy while maintaining the same level of language complexity as in the monologue task . Monologue task is found to produce the most unnoticed grammatical errors and dialogue predisposes the learners to pay more attention to lexical words . Results are discussed in the light of speech production model and their implications for language teaching are also provided .

## Key words

speech repair ; allocation of attention ; retelling ; monologue ; dialogue

## 1 . Introduction

Much SLA research within an information processing framework assumes that human attentional capacity is limited and that such limitation plays a very important role in second language speech processing in that how second language learners allocate their attentional resources affect their performance ( e .g . Robinson 1995 , 2003 ; Skehan 1998 ) . Research ( e .g . Foster & Skehan 1996 ; Robinson 2005 , 2007 ) has shown that task types can influence learners distribution of their attention to different aspects of the target language . Thus , careful manipulation of tasks to effectively channel learners attention to specific goals at specific times is of vital pedagogical importance . The present paper investigates attention allocation in speech production through learners self repairs in the oral production materials of 35 English majors in TEM 4 test , using Spoken and Written English Corpus of Chinese Learners . It aims to find out the distribution of different types of self repairs made in three tasks retelling , monologue or dialogue , with special focus on which task prompts learners to pay more attention to grammatical accuracy which is measured by the number of grammatical error repairs and that of unnoticed grammatical errors .

## 2 . Literature review

### 2 .1 Task types and allocation of attention in speech production

Task based language learning and teaching has generated great interest both as a means of clinically eliciting samples of learner language for purposes of research and as a device for organizing the content

and methodology of language teaching (Skehan 1998 ; Ellis 2000 ). From a psycholinguistic perspective a task is a device that guides learners to engage in certain types of language use and mental processing that are beneficial to acquisition . According to Skehan , Foster and Mehnert , “task properties have a significant impact on the nature of performance ” (1998 :245 ). In the area of learners language production , Skehan (1998 ) distinguishes three aspects of production : fluency , the capacity of the learner to mobilize his /her system to communicate in real time ; accuracy , the ability of the learner to use language according to target language norms ; and complexity , the utilization of elaborate and structured interlanguage structures . Skehan suggests that language users vary in the extent to which they emphasize fluency , accuracy or complexity , with some tasks predisposing them to focus on fluency , others on accuracy and yet others on complexity . For instance , Foster and Skehan (1996 ) studied subjects performance in terms of fluency , complexity , and error free clauses in personal information exchange task , narrative task and decision -making task . It was found that the personal and decision tasks lead to significantly higher accuracy than the narrative ones , while the personal task leads to lower complexity than the other two tasks . The narrative and decision tasks generate the least fluency , very significantly so compared with the personal tasks . Skehan argues that it may be possible to influence different aspects of language acquisition by providing opportunities for learners to engage in different types of production .

One aspect that has received much attention within task based research is the relationship between attention and task demand . Research ( e .g . Tarone 1983 , 1985 , 1990 ; Nobuyoshi & Ellis 1993 ) has shown different tasks can draw learners attention to different aspects of the target language , which yields different kinds of production . This kind of variation , which is due to task differences , is called “task induced variation ” by R . Ellis (1994 :135 ). This idea is also confirmed by Tarone (1983 , 1985 , 1990 ) who argues that as second language learners perform different tasks , their production of some grammatical , morphological and phonological forms will vary in a particular manner . For instance , Tarone (1983 ) reviewed a number of studies which suggested that the amount of attention paid to speech has an impact on the accuracy of what is said . For another example , Nobuyoshi and Ellis (1993 ) compared the effect of unfocused communicative tasks , in which no effort is made in the design of a task to target a particular linguistic feature , with focused communicative tasks in which some linguistic feature is targeted , on learners performance . They found that focused communicative tasks were more likely to draw learners attention to form , which led to more accurate production sustained over time . Some other researchers study whether task complexity affects learners attention to different aspects of language . For instance , Robinson s Cognition Hypothesis (2003 , 2005 , 2007 ) of adult task based language learning has advanced a series of assumptions and predictions of how increasing the cognitive complexity of language learning tasks may have the potential to draw learners attention to the way certain concepts are grammaticized in the second language . In his view , increasing cognitive complexity along resource -directing dimensions such as the number of elements in a task ( e .g . from the description of a simple space to a complicated space ) or the reasoning demands ( e .g . from narrative description tasks to those which require more reasoning ) leads to second language development .

## 2.2 Self repairs and allocation of attention

Second language learners self repair behavior has been one of the areas where attention allocation in speech production is studied . One large scale project which uses self repairs to study attention distribution in learner output processing is van Hest s 1996 project . She found that with the development of second language competence , speakers self repair behavior shows they become more sensitive to discourse level problems than to lower level structural errors .

In another study , Kormos (1999 ) advanced a framework explaining the relationship between self -repair and attention allocation . Her framework brings together theories on psycholinguistic processes of production , L2 research findings regarding the development of automaticity , as well as theories of consciousness , awareness , and noticing . In Kormos view , differences in self repair behavior reflect differences in monitoring , a conscious process which needs attentional control . Since it is commonly observed that in learners production , not all errors are detected and certain types of errors are more likely to go unnoticed than other types of errors , it has to be assumed that attentional limitations will affect the efficiency of the monitoring processes , and as a result , the number and type of errors noticed . Kormos 2000 study , which investigates the distribution and frequency of self repairs and the correction

rate of errors in the speech of 30 Hungarian learners of English at 3 levels of proficiency and of 10 native speakers of Hungarian ,shows that the amount of attention paid to the linguistic form of the utterance does not vary at different stages of L2 competence and that the distribution of attention in monitoring for errors is markedly different in L1 and L2 . Advanced L2 speakers use their extra attentional resources made available by the automaticity of certain encoding processes to check the discourse level aspects of their message .

Gilabert (2007 )tackled the issue of how and whether limited attentional resources affect self repair behavior when L2 learners were performing three task types ,namely a narrative task ,an instruction -giving task ,and a decision -making task for which two degrees of cognitive complexity were established . He found an overall effect of task complexity on self repairs behavior across task types ,with different behaviors existing among the three task types . His study confirms Kormos view that increasing task demand deviates attention from monitor .

### 2.3 Taxonomies of self repairs

To use self repairs to study attention allocation in output processing ,it is important to find out the types of repairs made . The following is a summary of the major types of repairs found in three major studies .

Table 1 . Three major taxonomies of L2 overt self repair

van Hest (1996 )	Kormos (1999 ,2000 )	Wang (2006 )
Different	Different Inappropriate information Ordering error Message abandonment	Information alternation elaboration
Appropriateness lexical syntactic tense or aspect insertion	Appropriateness appropriate level of information ambiguous refernce coherent terminology pragmatic appropriacy repair for good language	Appropriateness discourse level linguistic level
Error lexical syntactic tense or aspect morphological phonological conceptual	Error lexical gram matical phonological	Form lexical gram matical phonological
Rest	Rephrasing	

As the table shows ,speakers may distribute their attention to different aspects of his utterance . Though the sub categories are different ,the three taxonomies all agree on the classification of three major types of self repair :different information repair ,appropriateness repair and error or form repair . With the different information repair ,Kormos sub categorization includes inappropriate information repairs ,ordering error repairs and message abandonment repairs , while Wangs includes alteration repairs referring to those repairs in which the message is changed after repair and elaboration repairs where information is more specified ( Wang 2006 :45 ). All three studies classify appropriateness repair into different sub categories ,with van Hest focusing on lexical and gram matical aspects ,Kormos on informational aspects and Wang on discourse as well as gram matical aspects . All the three studies classify error repair into three categories :lexical ,gram matical and phonological . van Hest further breaks gram matical error repair into syntactic ,tense or aspect and morphological repair while Kormos and Wang simply adopts the more general term gram matical error repair .

### 3 . The present study

#### 3 .1 Significance of the present study

From the review above ,it's clear that attention allocation in second language learners speech production can be studied from the perspective of their self repair behavior ,which is the result of monitoring ,a conscious process requiring attention . However ,though the study of self repair has been a very popular area of investigation ,many studies ( e .g . Levelt 1983 ;Lennon 1984 ;Yang 2002 ;Chen 2004 ;Wang 2006 ; Wang 2007 ) focus mainly on the identification of repair types and their different distributions . Many other studies ,especially those by Chinese authors ,are devoted to introducing studies on self repairs ( e .g . Sun 2001 ;Chen 2002 ;Shen 2005 ) or to theorizing self repair behavior from the perspective of cognition or pragmatics ( e .g . Ma 2002 ,2003 ;Yao 2005 ) . Few studies in this area attribute high importance to the allocation of attention (except Kormos 2000 ) . The present study is one of the first few studies that study attention allocation from learners self repair behavior which can be directly observed in their language data . Consequently ,by providing concrete evidence of how learners distribute their attention in different tasks ,the study will give practical guidance to teachers who want to make use of tasks to influence learners development of different aspects of language .

#### 3 .2 Research questions

(1) How do learners allocate their attention in terms of appropriateness repairs ,lexical repairs and grammatical repairs in retelling ,monologue and dialogue ?

(2) Which task ,retelling ,monologue or dialogue ,prompts learners to pay more attention to grammatical accuracy ?

#### 3 .3 Material

Spoken and Written English Corpus of Chinese Learners ( Wen et al . 2005 ) ,published by Foreign Language Teaching and Research Press ,is used for the study . The corpus includes around one million lexical words ,which qualifies it as a medium sized corpus . It contains the oral production materials in TEM 4 test ,a nation wide English test for sophomore English majors in China . The data covers a period of 7 years ,from 1996 -2002 . The corpus divides the data on a yearly basis into different groups of around 35 students each randomly . Test items include retelling ,monologue and dialogue . The present study has selected ,using random sampling method ,the data of 35 students in Group 1 in 2001 as the research material . Since the corpus randomly groups students in each group ,the data selected from any group are believed to have the general features of all the groups and consequently ,the results are deemed to be generalizable .

#### 3 .4 Categorization of self repairs

For the purpose of the present paper ,since both the different information repairs and appropriateness repairs reviewed above aim at making the message more appropriate rather than correcting a language error ,they are collapsed into the appropriateness repair category . With error repair ,since the main concern is with grammatical accuracy ,only two error repair sub categories are dealt with :lexical repair and grammatical repair . Phonological repair will not be dealt with because ,on the one hand ,the focus of the present study is on grammatical accuracy and on the other hand ,it has been found that such repair is quite rare in the materials under study . With grammatical error repair ,the present study follows Kormos and Wang's more general practice and adopts the umbrella term grammatical repair to include syntactic ,tense or aspect and morphological repair . Thus ,in the present study ,the three main repair categories are appropriateness repairs ,lexical repairs and grammatical repairs . The criterion for dividing lexical repairs and grammatical repairs is whether the given lexical entry is accessed via the syntactic building procedures or via lexical access . More specifically ,repairs in tense ,person ,sentence structure and collocations are assigned to the grammatical repair category while repairs using synonyms ,antonyms and other words affecting only meaning but not grammaticality are classified as lexical repairs .

In order to get a more accurate picture of learners attention allocation in terms of grammatical

accuracy in the three tasks ,a fourth category is set up ,that is the unnoticed grammatical error category .

### 3.5 Data collection

All the transcripts are tagged using AnnoTool 1.0 . With the three types of repairs ,regardless of whether the repairs are done correctly or not ,the study tags all those which appear immediately after the relevant trouble forms ,following Levelt's main interruption rule which states that as soon as speakers detect trouble ,they will stop their speech and make a repair (1989) . In the case where repairs do not immediately follow the trouble forms ,tagging is strictly confined to those with clear indication that they are made with regard to a form in the distance .

Appropriateness repair ,tagged as SEMR ,covers all instances of different information repairs and appropriateness repairs which focus on meaning rather than grammar . All the repaired verbs bearing tense ,aspect and morphological features as well as syntactic repairs referring to those having to do with grammatical structures and collocations are tagged as SYNRR . In the case of repairs involving both the structure /collocation and tense /aspect or morphological features ,they are tagged twice . Lexical repairs

LEXR refer to the repair of lexical words using synonyms ,antonyms and any other words affecting only meaning but not grammaticality . All the unnoticed grammatical errors are tagged as ERSYN . The following are some examples demonstrating the detailed tagging criteria .

#### (1) Appropriateness repair

- 1) I once knew an old woman a old man SEMR whose bad memory made ... made his ... made him famous ... (Examinee A01 01 02 ,Repair type :different information)
- 2) In the win ... in the spring SEMR ,he often take ,took us go out . (Examinee B01 01 14 ,Repair type :different information)
- 3) I can learn more things about your ... about western custo SEMR ... customers . (Examinee C01 01 20 ,Repair type :appropriateness)
- 4) our society is become more and more open now ,and a foreign ,knowing a foreign language SEMR is very important and very useful . (Examinee C01 01 24 ,Repair type :appropriateness)

#### (2) Lexical repair

- 5) she wrote a ... she he LEXR wrote the name of the town in a paper . (Examinee A01 01 03)
- 6) In the win ... in the spring ,he often take ,took us go out for they ... to pre ... appreciate LEXR the good scenery . (Examinee B01 01 14)
- 7) And he is a handsome he ... is a beautiful LEXR woman . (Examinee B01 01 28)

#### (3) Grammatical repair

- 8) Mr is older man with a ... with an SYNRR ordinary looking and he is not veryer ... arrogant . (Examinee B01 01 34 ,Repair type :morphological)
- 9) In the win ... in the spring ,he often take ,took SYNRR us go out . (Examinee B01 01 14 ,Repair type :tense)
- 10) Smith was very sad to tell his wife that he didn t forget the ... na ... he didn t forget the piece of paper was putting in ... has been put in SYNRR his pocket but he forget where he have left his children ... (Examinee A01 01 16 ,Repair type :tense /aspect)
- 11) It is because that he didnt ,eh ... just care of my ,um ,our ,um ,take ,take care of SYNRR our ,our studying ,... (Examinee B01 01 14 ,Repair type :syntactic)
- 12) John Smith decided to take ... eh ... his children to a seaside town ... eh ... where which SYNRR is ... eh ... three ... three ... three hours train ... away ... (Examinee A01 01 -11 ,Repair type :syntactic)

#### (4) Unnoticed grammatical errors

- 13) He did not did not remember to eat meals or also to attended ERSYN meeting ,... (Examinee A01 01 01 ,Error type :morphological)
- 14) His wife have ERSYN to remind him of ... the meeting ,news and classes . (Examinee A01 -01 16 ,Error type :morphological)
- 15) I was thankful to Mr Zhou ,because he ... he not only help ERSYN me with my lessons ,but also he help ERSYN me to restore my confidence I have lost ERSYN for a long time .

- (Examinee B01 01 19 ,Error type :tense /aspect )
- 16 ) So when he went to the railway station he forget the town the name of the town ,and it was luckily ERSYN that his friend happen to be there . ( Examinee A01 01 03 , Error type : syntactic )
- 17 ) and his forgetfulness always make him embarrassment ERSYN in a university and he is a famous professor . ( Examinee A01 01 03 ,Error type :syntactic )

After all the data are tagged , WordSmith 4 software is then used to sort out the results which are then processed by SPSS13 .0 .

### 3.6 Results

It is found out that ,among the three tasks ,the number of people making the gram matical repair (31 ) and the mean number of repairs (4 .17 ) done in this category rank the highest in retelling (See Table 2 ) .

Table 2 . The mean number of repairs in different categories and of unnoticed gram matical errors in different tasks and the number of people ( No . ) involved

		Retelling	Monologue	Dialogue
Gram matical repair	No .	31	30	22
	Mean	4 .17	3 .4	1 .78
Appropriateness repair	No .	30	30	24
	Mean	3 .83	3 .43	1 .91
Lexical repair	No .	13	20	18
	Mean	2 .08	2 .20	1 .78
Unnoticed gram matical error	No .	35	35	35
	Mean	11 .40	17 .11	11 .14

In terms of appropriateness repair ,retelling and monologue generate equal number of people (30 ) and enjoy more or less equivalent number of times this repair is done (3 .83 vs 3 .43 ) . The number of people who have done lexical repairs is the biggest in monologue (20 ) while the mean number of times is close to that in retelling (2 .20 vs 2 .08 ) . In dialogue ,learners engage in less gram matical and appropriateness repairs than in the other two tasks and the mean number of repair times (1 .78 ,1 .91 ) is also the smallest . All learners have made unnoticed gram matical errors ,with the mean number of such errors the highest in monologue task (17 .11 ) .

To find out whether there is a significant difference among the number of repair times in different categories as well as among the number of unnoticed gram matical errors in the three tasks ,Friedman test is used to compare the different means since the data collected are frequency data . The following is the result .

Table 3 . A comparison of the mean number of repairs in different categories and of unnoticed gram matical errors in the three tasks —Friedman test

Gram matical repair	Appropriateness repair	Lexical repair	Unnoticed gram matical error
.003	.001	.607	.000

p .005

As Table 3 shows ,apart from lexical repair ,the three tasks display significant differences in the other three categories ,namely ,gram matical repair ,appropriateness repair and unnoticed gram matical error . When this is studied together with Table 2 ,it is clear that retelling task enables the learners to make the most number of gram matical repairs and appropriateness repairs while dialogue task generates the least number of such repairs ,with monologue task in the middle .In terms of unnoticed gram matical errors ,monologue task produces the worst result and the learners seem to do the best in dialogue .

In order to more accurately compare attentional allocation ,the study compares the vocabulary used in the three tasks to see whether the differences in attention distribution as represented by self repairs are

due to different language difficulty in the tasks. Research has found that richer vocabulary is characteristic of better language knowledge (Laufer & Nation 1995). It is generally accepted that the type and token ratio is a good indicator of the complexity of language in corpora. The bigger the type / token ratio, the richer the vocabulary and the higher the complexity of the language used (Wen et al., 2005). Consequently, if the difficulty level of the vocabulary used in the three tasks can be found out, it can be decided whether complexity of language is a factor affecting learners' attention distribution.

The study uses Range32 designed by Paul Nation and Averil Coxhead of the School of Linguistics and Applied Language Studies in Victoria University in New Zealand to measure the vocabulary used in the three tasks. Range32 provides 3 base word lists. The first (BASEWRD1.txt) includes the most frequent 1000 words of English. The second (BASEWRD2.txt) includes the 2nd 1000 most frequent words, and the third (BASEWRD3.txt) includes words not in the first 2000 words of English but which are frequent in upper secondary school and university texts from a wide range of subjects. All of these base lists include the base forms of words and derived forms. The following is the result.

Table 4. The number of base words used and the type / token ratio in different tasks

	Retelling	Monologue	Dialogue
BASEWRD1	110.09	107.51	137.31
BASEWRD2	9.31	10.83	9.75
BASEWRD3	27.94	30.46	29.06
Type / token ratio	.404	.407	.332

Table 5. Comparison of the type / token ratio in the three tasks

	Mean	Std. Deviation	Std. Error of mean	95 % Confidence Interval of the Difference		t	df	Sig. (2 tailed)
				Lower	Upper			
A — B	-.00243	.03568	.00603	-.01469	.00983	-.403	34	.689
A — C	.07269	.05292	.00895	.05452	.09087	8.127	34	.000
B — C	.07513	.05830	.00986	.05510	.09515	7.623	34	.000

A =retelling B =monologue C =dialogue

As is shown in Table 4, learners use far more base-word 1 words (over 100) than words in the other two levels which are used in quite limited numbers (minimum 9.31, maximum 30.46) in all the three tasks with slight differences among them. This suggests that the learners' language proficiency is not very high. In Table 5, it is found that there is no significant difference in terms of type / token ratio between retelling and monologue, which shows the language difficulty in the two tasks is more or less of the same level. However, their type / token ratios are significantly different from that in dialogue. From Table 4, it can be seen that the type / token ratio in dialogue is much smaller than that in the other two tasks (.332 vs .404 & .407), which suggests that in dialogue, learners tend to use less complex language.

### 3.7 Summary of the results

With regard to Research Question 1, the learners allocate their attention differently as shown by the number of self-repairs made in the three tasks. More specifically, retelling task enables the learners to pay more attention to grammar and appropriateness in that they make the most number of repairs in these two aspects. Learners do not pay much attention to these two aspects in dialogue task in that the number of appropriateness repairs and grammatical repairs are the smallest among the three tasks. The amount of attention to grammar and appropriateness is in the medium range with monologue task. The learners seem to pay equal attention to lexical words in the three tasks.

With regard to the second research question, it is found that the learners let more grammatical errors go unnoticed in monologue than in the other two tasks while in dialogue, the least number of such errors are made. In retelling task, the learners make more unnoticed grammatical errors than in dialogue task. However, when this is studied in the light of language complexity, a more sophisticated picture emerges. The comparison of the type/token ratios in the three tasks reveals that learners' language is equally complex in monologue and retelling but these learners tend to use simpler language in dialogue. Keeping this result in perspective, it is clear that comparatively speaking, retelling is the task that enables the learners to pay more attention to grammatical accuracy while maintaining a certain degree of language complexity.

### 3.8 Discussion

The retelling task requires the learners to retell the story of a forgetful university professor vacationing by the seaside while the monologue task asks the learners to describe an unusual teacher in their life. In the dialogue, learners are told to share their opinions about studying abroad after graduating from high school. The three tasks are thus quite close in terms of the familiarity of content. The comparison of type/token ratios shows that while dialogue prompts the learners to use simpler language, retelling and monologue generate comparable language complexity. Apparently, the fact that there are some differences in learners' attentional allocation in the three tasks cannot be very well explained by language complexity alone. The present study holds the view that the differences can be readily explained if we look at the speech production process.

In his speech production model (See Figure 1), Levelt (1989) argues that speech production can be described through the functioning of a number of processing components that are relatively autonomous in the system, each of which receives a certain kind of input and produces a certain kind of output. The output of one component may become the input for another. The component at the top is the Conceptualizer responsible for conceiving an intention and for transforming the intention into a proposition which serves as the input of the next processing component, the Formulator. It does this in two stages, which Levelt terms "macroplanning" and "microplanning". Macroplanning involves conceiving a communicative goal, creating subgoals and retrieving the necessary information for expression of these subgoals. Microplanning entails giving propositional shape to these subgoals and the overall message, and selecting an informational perspective so that, for example, one entity is chosen as the topic of an utterance. The Formulator "translates a conceptual structure into a linguistic structure" (Levelt 1989:11) in two steps. First, there is grammatical encoding of the propositional message. The Grammatical Encoder consists of procedures for accessing lemmas, and of syntactic building procedures. The speaker's lemma contains a lexical word's meaning and syntax, which are declarative knowledge stored in his mental lexicon. A lemma will be activated when its meaning matches part of the preverbal message. This will make its syntax available, which in turn will call for or activate certain syntactic building procedures which are procedural knowledge stored in the Grammatical Encoder. When all the relevant lemmas have been accessed and all the syntactic building procedures have done their work, the Grammatical Encoder has produced a surface structure — an ordered string of lemmas grouped in phrases and subphrases of various kinds, which is then deposited in the Syntactic Buffer.

Then, there is phonological encoding. Its function is to retrieve or build a phonetic or articulatory plan for each lemma and for the utterance as a whole. The result of phonological encoding is a phonetic or articulatory plan, which is an internal representation of how the planned utterance should be articulated, called internal speech. It becomes the input to the next processing component: the Articulator. The Articulator's function is to take the phonetic plan produced by the Formulator and to execute it physically by coordinating the movements of the speaker's respiratory system and muscles. The resulting output is overt, external speech. As production of overt speech often lags behind the generation of internal speech, Levelt postulates another storage device, an "Articulatory Buffer", to hold as yet unuttered phonetic plans. While producing his own speech, the speaker is at the same time listening to his own overt speech, just as he can listen to the speech of his interlocutors. This involves the Audition processing component. This processing takes place by means of the Speech-Comprehension System which has access to both the form information and the lemma information in the lexicon. The same comprehension system also enables the speaker to attend to his own internal speech. In this way, the

speaker can monitor and detect trouble not only in his own internal speech but also in his overt speech whenever his processing capacity allows him .

Figure 1 . Levelt s production model (1989 9 )

According to Levelt , native speakers do not have to think about grammatical encoding and phonological encoding . They only have to pay attention to the conceptualization of ideas and the monitoring process where they have to be on alert for potential mistakes . However , with second language learners , grammatical encoding and phonological encoding are not automatic processes ( de Bot 1992 ; Pienemann 1998 ; Temple 1997 , 2000 ) and thus demand learners attention . As a result , learners attention has to be channeled into thinking about ideas , which involves both macroplanning and

microplanning, formulating linguistic plans involving both grammatical encoding and phonological encoding, and monitoring their utterances. Being limited in attentional resources, learners will have to adjust their attentional focus according to different task demands. Now let's have a look at the differences in terms of idea formulation, linguistic encoding and monitoring in retelling, monologue and dialogue.

### (1) Idea formulation

The retelling passage is about 300 words long. Learners listen to the passage twice, during which process they can take notes. Then, they immediately start retelling without any preparation time. Because of the nature of retelling, learners normally do not have to conceptualize new ideas. All they have to do is to think about or try to remember how the ideas in the passage are realized linguistically. Consequently, the cognitive load of formulating ideas is quite limited in this task.

In both the monologue task and the dialogue task, the learners are required to talk about a familiar topic. They have three minutes to prepare before they start to talk. With these two tasks, learners have to engage themselves in idea conceptualization. However, there is some difference in terms of the degree of cognitive load. In the monologue task, learners have to think about not only an overall idea framework but also ideas that they are currently trying to express. To use Levelt's terms, they have to engage themselves in both macroplanning and microplanning. In the dialogue task on the other hand, there is no such demand on the part of the learners to think about the overall idea framework. All they have to do is to pay attention to what the other party says and then quickly formulate ideas to respond to it. Consequently, the cognitive load in terms of idea conceptualization is not as heavy as that in the monologue task.

### (2) Linguistic encoding

Though in the retelling task, while the learners are listening to the passage for ideas, they may also try to remember linguistic forms used to express these ideas, their attention focus is still on meaning since it's a feature of our memory mechanism that we tend to remember meaning rather than forms (Gui 1991: 133). Thus, when they start retelling, they still have to do linguistic encoding. Linguistic encoding is, of course, a must for monologue and dialogue. However, the level of difficulty of linguistic encoding is different among the three tasks.

In retelling, though learners tend to focus on meaning rather than on form, their listening to the passage twice will inevitably leave some traces of the language forms in their memory. In other words, the listening will help reduce the difficulty level of linguistic encoding. In monologue, as can be seen from the above analysis of the complexity of language in the three tasks, these learners tend to use as complex language as they do in retelling. However, having to formulate the linguistic plan all by themselves, learners have a heavy work load of linguistic encoding. In dialogue, learners' language is less complex than that in the other two tasks as is demonstrated by its small type/token ratio. Consequently, the linguistic encoding is not as difficult as in monologue.

### (3) Monitoring

Since it has been suggested that the cognitive load of conceptualizing ideas and of linguistic encoding is the biggest in monologue, we would expect the learners to pay less attention to grammatical monitoring in this task. This is borne out by the fact that learners make fewer grammatical repairs than in the retelling task which generates comparable language complexity. It is further evidenced by the fact that it produces the most unnoticed grammatical errors among the three tasks.

In dialogue, though the learners have to engage themselves in some idea generalization process, they seem to counteract it by using simpler language to make linguistic encoding easier so that they can spare more attention to monitoring. However, it seems that their attention is diverted more to lexical words than to grammar, which is shown by the fact that these learners make the same amount of lexical repairs as in the other two tasks but the least grammatical repairs. This is perhaps because in dialogue, both sides have the responsibility to make sure they understand each other in order to keep the conversation going and the use of lexical words is very important in making oneself understood (Poulisse & Bongaerts 1994). The fact that the learners still manage to let the least grammatical errors go unnoticed can be explained by

the simple language complexity these learners produce in this task .

In retelling , because of the comparatively lighter cognitive load of ideas conceptualization and grammatical encoding , learners can effectively monitor their grammar , appropriateness of language and lexical words while at the same time maintain a certain level of language complexity .

#### 4 . Conclusion

From the discussion above , a conclusion can be drawn . Learners attention to different aspects of the language production process is affected by task demand . Monologue requires learners not only to conceptualize ideas but also to engage themselves in heavy linguistic encoding work . As a result , their monitoring ability is reduced and consequently , they make the most unnoticed grammatical errors . In dialogue , though the learners manage to make fewer grammatical mistakes , this is achieved at the expense of language complexity since they tend to resort to using simpler language to counteract the cognitive load of conceptualizing ideas . Retelling is the only task among the three that enables the learners not only to engage themselves in practicing complex language use , but also to successfully monitor their grammar , appropriateness of language as well as lexical words .

#### 5 . Implications for language teaching and learning

This conclusion has some important implications for English language teaching and learning . When teachers choose a certain task for students to practice their oral English , they must be aware of the intrinsic task characteristics which predispose learners to focus on certain aspects of their utterances . The three tasks investigated in the study are the most often used tasks by teachers in China . However , when teachers choose a certain task over another , they don't seem to pay much attention to such intrinsic characteristics . For instance , though a lot of research has been done on the positive roles retelling can play in language teaching and learning in the Chinese context ( e . g . Gao 2007 ; Zhang 2007 ) , not much has been done to address the issue of learners attention distribution in this task . Thus , it is difficult for teachers to see why this task can lead to language development since learners don't seem to learn any new structures or grammar . However , if we look at the attention distribution in this task , it is clear that retelling , compared with monologue and dialogue , enables sophomore English majors to more effectively monitor their grammar as well as appropriateness of language . What's more , this task also allows these learners to practice as complex language as in the monologue task . Thus , it is a more appropriate means than monologue and dialogue for practicing one's oral English at this level .

In the monologue task , though learners can produce as complex language as in retelling , their ability to control grammatical encoding to generate correct utterances and the ability to effectively monitor their utterances are undermined because of the heavy cognitive load of conceptualizing ideas . If learners engage themselves in this practice often , the grammatical errors tend to be repeated more frequently , which may eventually lead to fossilization . Thus , for sophomore students , this task should be implemented with caution . Having said that , a fact that should not be ignored is that this task does encourage learners to use more complex language than the dialogue task . So if teachers want to develop students ability in this aspect and use this task , they should lower the students cognitive load of conceptualizing ideas by giving students familiar and less challenging topics . They can also remind the students to pay attention to their grammar before the task is implemented .

Dialogue has been a very popular task in China . Much research has been done to advocate its communicative value in language teaching and learning ( e . g . Dong 2007 ; Zhang 2008 ) . However , teachers should know that while dialogue encourages learners to talk , learners tend to be conservative in their language use and their attention is devoted more to lexical use rather than to grammar and appropriateness of language . Consequently , when this task is used , teachers should encourage learners to use more complex language , for instance , by requiring them to use certain words or structures or by asking them to talk about a challenging topic after they have done some research on the topic .

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