THE EFFECTS OF PLANNING CONDITIONS ON PRIMARY SCHOOL ESL PUPILS' NARRATIVE WRITING

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Abstract

The present study investigates the writing performance in terms of language complexity, accuracy and fluency (CAF) and the pupils' perceptions of their performance under different planning conditions and the relationship between pupils' perceptions and their performance. There were 78 ESL pupils from a Chinese primary school in Malaysia who were grouped into three planning conditions:1) pre-task planning, 2) on-line planning and 3) no planning groups. This study employs a variety of data collection methods that include the collection of pupils' written tasks and questionnaire surveys. The results of the study indicate that planning conditions did not have a significant impact on pupils' writing performance except for the effect of pre-task planning on pupils' written fluency. The results also differ greatly from numerous previous studies, which have been mainly conducted on adult writers. The present study also shows that pupils' perceptions are partially related to their writing performance. The reasons for such contradictions are discussed. The findings have implications for the teaching of writing in the ESL context.

Keywords: second language writing; planning conditions; narrative writing task; primary school ESL learners; writing process

The task of writing can often be challenging for ESL learners because of the different mental processes involved. However, the task of completing a piece of writing can be even more demanding for young ESL learners, whose English language proficiency is still developing. It is argued that young ESL learners' limited range of vocabulary and basic mastery of grammar can affect their writing performance (Nam, 2011). Confusion between school and home environments, cultural backgrounds, and underdeveloped bilingualism are among the factors that affect young ESL writers' proficiency (Nam, 2011). Because of this, their writing may not reflect the complexity of mature writers. When they write, they tend to rely on any linguistic resource available to them and their writing could be characterized by spelling and letter forms that are invented and unconventional, inaccurate segmentation and punctuation and the expression of ideas through drawing or writing (Hudelson, 1989).

According to Kellogg (1996), planning is one of the mental processes that learners employ in their writing. Based on second language acquisition (SLA) literature, planning can be categorised into two types: 1) pre-task planning and 2) on-line planning. These two types of planning differ in terms of the provision of time to learners. In pre-task planning, time is allocated to learners before the actual performance of a task (Johnson, Mercado & Acevedo, 2012), whereas in on-line planning or within-task planning, the unpressured time limit is

given to learners to perform pre-production and post-production monitoring (Ellis & Yuan, 2004). In the process of planning, learners usually engage in subprocesses such as idea generation, goal setting, and organisation (Johnson et al., 2012). In connection to this, Ellis (2005) pointed out that planning conditions affect L2 production and that studying them is important.

Planning conditions in writing

In research on writing, many theories have been adopted by researchers such as Bereiter and Scardamalia (1987), Hayes and Flower (1980), Grabe (2001), Grabe and Kaplan (1996) and Zimmerman (2000) to explain cognitive processes in writing. A writer's planning process can take place prior to performing a writing task and/ or while performing a writing task. As stated earlier, there are two types of planning identified in SLA research: pre-task planning (PTP) and on-line planning (OLP) (Ellis, 2005). The former can be further broken down into rehearsal and strategic planning (Ellis, 2005). Rehearsal refers to task repetition before the actual writing whilst strategic planning involves the encoding of the actual task materials which is done as a preparation for a language task (Ellis, 2005).

In the planning phase of writing, L2 writers draw their mental resources from the central executive and visuospatial sketchpad (VSSP) in order to visualise images, whereas, in the translating phase, there are more demands on the verbal

components (Kellogg, 1996). According to Ellis and Yuan (2004), writers who perform pre-task planning can devote their working memory resources to the translating phase of writing, a process involving the selection of relevant lexical units and syntactic frames, enabling the encoding of these units and facilitating their representation within the executive system, either graphologically or phonologically (Ellis & Yuan, 2004). On-line planning, however, allows writers to write without time pressure even though they have to allocate their working memory resources to both planning and translating phases. Mental resources allocation differ between pre-task and on-line planning due to the limited capacity of the central executive system according to Kellogg (1996). This explains why different planning conditions prioritise either form or meaning. Apart from this, second language learners' limited attentional capacity can lead to trade-off effects resulting in competition between language complexity, accuracy, and fluency (Skehan & Foster, 1997). Skehan and Foster's (1997) study highlights the link between task type and planning. They found that when L2 learners were given structured tasks and planning opportunity, they produced more accurate speech. However, when given tasks involving on-line planning or requiring complex outcomes, learners' speech production tended to be more complex. The notion of a Trade-off Hypothesis was then proposed to describe the attentional resources tension between form (complexity and accuracy) and fluency (Skehan, 2009). Hence, if learners perform a language task under different task conditions, they may perform better in one or two but not in all three areas of their CAF. A task condition which benefits all three aspects of CAF simultaneously is uncommon (Skehan, 2009).

Other than this, another theory that can be considered in the designing and sequencing language task is Robinson's Cognition Hypothesis. Robinson's Cognition Hypothesis claims that the sequence of L2 tasks should be according to the increases of learners' cognitive complexity. In relation to this theory, task complexity can be manipulated based on the reasoning demand of the task as well as the planning time required in the task (Robinson, 2011). Thus, planning plays important roles in eliciting learners' language production and manipulating the task complexity.

Effects of planning conditions on CAF
To date, various CAF studies regarding the effects of planning conditions on language performance have been carried out (e.g., Wendel, 1997; Ellis & Yuan, 2004; Sangarun, 2005; Abdollahzadeh & Kashani, 2011; Johnson et al., 2012; Piri, Barati, & Ketabi, 2012). However, these studies have obtained mixed results. For instance, the study carried out by Wendel (1997) investigated the effects of planning

on 40 Japanese junior college students' speaking performance. In Wendel's (1997) study he discovered that strategic planning, which is a kind of pre-task planning, promoted learners' language fluency and syntactic complexity but not accuracy. Ellis and Yuan (2004) compared the writing of 42 Chinese undergraduate students under three planning conditions: 1) pre-task planning, 2) on-line planning and 3) no-planning groups. They were required to complete a narrative task comprising six pictures. The results showed that pre-task planning produced more fluent, syntactically varied writing, whilst on-line planning produced writing with better accuracy. The results obtained from Ellis and Yuan (2004) were later confirmed by Ghavamnia, Tavakoli and Esteki's (2013) study which was similarly carried out on 40 intermediate EFL learners from a language centre in Iran using a narrative writing task containing a series of pictures. Nevertheless, in the study by Johnson et al. (2012), it was found that pre-task planning had insignificant effects on L2 writing fluency and no effect at all on grammatical complexity. The participants of their study comprised learners with low proficiency in writing. They proposed possible explanations for why the findings of their study differed from previous studies. These include learners' knowledge of the written genre and also the threshold of learners' proficiency.

Another study, by Piri et al. (2012), adopted a different research design in investigating the CAF of adult L2 learners. They investigated pre-task planning, on-line planning and a mixture of the two planning conditions. For the fluency measure, their study found that the pre-task planning group significantly outperformed the on-line planning group but there was no difference when compared to the combined planning condition group. However, their research found no significant difference across groups for the measures of accuracy and complexity. Nevertheless, a recent study conducted by Yi and Ni (2015) indicated that learners under a pre-task planning condition produced greater lexical complexity while learners under an on-line planning condition produced higher fluency than the learners who did not conduct planning conditioning.

Other than this, researchers have also attempted to look at the role of strategic planning on learners' performance (e.g., Baleghizadeh & Shahri, 2013; Sangarun, 2005). Strategic planning, similar to pre-task planning, refers to the time allocated to learners to plan prior to performing a task. In the context of oral production, Sangarun (2005) attempted to manipulate learners' pre-task planning with different planning foci: 1) form-focused, 2) meaning-focused and 3) meaning/form focused. Her study revealed that learners, in general, prefer to engage in meaning-focused strategic planning regardless of the planning foci given to them. Her study also pointed out that pre-task planning could

have positive effects on learners' performance depending on the learners' orientation towards form, meaning or both. Baleghizadeh and Shahri, (2013) found that opportunity for rehearsal and strategic planning can affect fluency in oral production but not complexity and accuracy. The findings obtained from these studies differed from Wendel's (1997) study which claimed that strategic planning affects speech fluency and complexity but no effect on accuracy. Wendel (1997) argued that in strategic planning learners' "off-line monitoring" of grammar does not affect learners' "on-line performance" in promoting accuracy. However, as pointed out by Johnson et al. (2012) writing, unlike speaking, is a recursive process and because of this planning prior to writing may not significantly affect learners' writing complexity, accuracy and fluency given that on-line planning and monitoring can possibly reduce its impact. This also highlights the role of online planning in the process of writing and the need for further investigation on how it influences L2 learners' writing performance.

Learners' perceptions of task performance
A review of previous studies shows that studies on learners' perceptions of planning processes are comparatively fewer than the studies on the effects of planning on performance (e.g., Ellis & Yuan, 2004; Li, Chen, & Sun, 2015). Nevertheless, studying on learners' perceptions help to explain the main results for learners' performances in each planning condition as well as to ascertain the connection between learners' perception and their actual performance. Ellis and Yuan's (2004) study involved conducting an open-ended questionnaire survey to explore how learners felt about the writing task and how they approached the task. They found that learners did not feel nervous in the writing process. Nevertheless, the learners in the pre-task planning and no planning groups reported that they felt some time pressure to complete the task. The time pressure felt by the learners hindered them from monitoring the accuracy of their writing.

In a more recent study carried out by Li et al. (2014), a questionnaire survey was administered which contained questions on the effects of planning conditions on their performance. The results from Li et al.'s (2014) study indicated that the majority of the participants agreed with the positive effects of planning on the quantity (time, number of words, number of syllables) and the quality (CAF) of their language output if they were given a suitable duration for task planning. According to the respondents in Li et al.'s (2014) study, little planning time did not help them to plan, and an excessively long duration of planning caused them to forget about the content they had previously planned. However, the task employed in Li et al.'s (2014) study was an oral task. In Jeon et al.'s (2014) study, a multiple-choice questionnaire was

conducted to investigate the affective factors associated with L2 writing. It was found that learners' perceptions of language had no relation to their actual proficiency levels and that learners with higher language proficiency were inclined to feel a higher level of apprehension about their performance. Although Jeon et al. (2014) did not investigate planning conditions; the findings show that learners' perceptions of their performance are not necessarily reflective of their actual performance. Studies of planning conditions coupled with an investigation into learners' perceptions of their performance can inform our understanding of learners' planning processes and how different conditions affect learners' performance.

Thus, based on the elaboration above, at present, most studies on planning conditions have mainly focused on ESL learners at tertiary levels. Studies on the effects of planning on young ESL learners' language production, however, remain scarce. In addition, little is known about how young ESL learners plan their writing.

The present research attempts to address the gap in the literature with a twofold aim: 1) to investigate the effects of planning conditions on the performance of Chinese primary school pupils' narrative writing, and 2) to explore pupils' mental processes while they perform an L2 writing task. Based on Ellis and Yuan (2004), the pupils' writing was analysed regarding its complexity, accuracy, and fluency (CAF). This study also adopted Kellogg's (1996) model in analysing how these pupils performed the writing task. With this focus on young ESL learners' language production, the findings of the study will enrich the pool of knowledge on SLA planning research and contribute to our current understanding of theories of second language writing. The study also proposes recommendations to improve the practice of English language writing in the primary school context.

METHOD
Design
The present study investigates 78 participants with similar language proficiency levels who were grouped into three different planning conditions: pre-task planning (PTP), on-line planning (OLP) and control/no planning (NP) groups. The time allocation for each planning condition is tabulated in Table 1.

The present study consisted of two quantitative phases which is replicated from the design of Ellis and Yuan's (2004) study. The first quantitative phase consisted of a quasi-experiment post-test where the pupils were grouped according to the three different planning conditions prior to the writing task. There was only one post-test conducted in this study as the intention of this study is to

compare the differences between the experimental groups (PTP and OLP groups) and the control group (NP group). Following the post-test, the researchers administered two sets of questionnaires to the pupils in the second phase of the quantitative data collection.

Table 1. Time allocated for each planning condition

Planning Condition	*n*	Pre-task Planning	On-line Planning	Time for Writing
Pre-task Planning (PTP)	26	10 minutes	10 minutes	20 minutes
On-line Planning (OLP)	26	None	Unlimited time	Unlimited time
No Planning (NP)	26	None	20 minutes	20 minutes

Data sources
The participants in the present study were 78 primary school pupils from Selangor state who were in Year 6 (12 years old). The selected pupils started to learn English in Year 1 (7 years old) with exposure to English language instruction for one hour in Standard One (Year 1 to Year 3) and two hours in Standard Two (Year 4 to Year 6) in one week.

The language proficiency of pupils in the present study varied from lower-intermediate (50 marks to 60 marks) to high proficiency (80 marks and above). To ensure learners' language output could be obtained adequately for analysis, the researchers excluded pupils with a basic level of proficiency from this study.

The language proficiency levels of the pupils were determined based on the performance of their Primary School Achievement Test or *Ujian Pencapaian Sekolah Rendah* (UPSR) trial exam, which is a district level evaluation preceding the centralised national examination for all the primary school pupils in Malaysia. The selected participants in the present study consisted of pupils who scored more than 50 marks in their UPSR trial exam. This selection based on their English language proficiency was to ensure that they were able to write full essays for analysis. The pupils were randomly divided into three groups of 26.

Data collection
The primary instrument used in the study was a narrative writing task given to the pupils. The task consisted of three pictures accompanied by keywords for each picture. Similar tasks have been used by previous researchers (e.g. Abdollahzadeh & Kashmani, 2011; Seyyedi, Ismail, Orang, & Nejad, 2013) to elicit learners' written output. However, unlike the tasks used by the previous research, the task used in the present study contained keywords, following the format used in their actual examinations. The task given to the pupils in the PTP, OLP, and NP was similar with different instructions (see Appendices 1, 2 and 3). The results obtained from this instrument are used to determine the effects of planning conditions on young writers' CAF.

To triangulate the source of the data, two questionnaire forms were administered to the pupils. (Appendices 4 & 5). The items of the questionnaire were developed based on the planning processes involved and constructs of CAF listed as in the study carried out by Ellis and Yuan (2004). The items on the questionnaire related to how the pupils approached their writing task and their opinions of their performance in the task.

Measuring Language Production
The measurements of the complexity, fluency, and accuracy of pupils' language production are as follows based on Ellis and Yuan's (2004) study:
1. Complexity
   a) Syntactic complexity: the ratio of clauses to T-units.
   b) Syntactic variety: the total number of different grammatical verb forms used in the task.
   c) Mean segmental type-token ratio (MSTTR): obtained by dividing the total number of different words by the total number of words in the segment (40 words). Mean scores obtained from each segment are added together and divided by the number of segments.
2. Accuracy
   a) Error-free clauses: the percentage of clauses that do not contain any syntactical, morphological and lexical choice errors.
   b) Correct verb forms: the percentage of correct usage of verbs in terms of subject-verb agreement, tense, modality, and aspect.
3. Fluency
   a) Syllables per minute.
   b) Number of dysfluencies: dividing the number of reformulated words by the total number of words produced in the task.

Data analysis
Parametric (one-way ANOVA) and non-parametric (Kruskal-Wallis H) tests are used to analyse pupils' performance regarding mean scores and statistical differences and to present the statistical findings obtained from the writing task and questionnaires. The use of the two statistical measures is in accordance to the categorisation of parametric and non-parametric measures based on Field (2009). To determine whether to employ parametric or non-

parametric tests, the research has to carry out two ways of normality tests: 1) visual and 2) statistical. The visual methods of checking normality included examining the Q-Q plots and box plots for all the CAF measures to ascertain whether there were outliers in the collected data. The statistical methods of normality check encompassed Shapiro-Wilk, Kolmogorov-Smirnov, as well as skewness and kurtosis tests for all the data collected for all the CAF measures. Other than this, a test of homogeneity of variances was also conducted to verify the equality of variances across groups for each CAF measure. One-way ANOVA, which is a parametric test, was employed for the data which is normally distributed; Kruskal-Wallis H, which is a non-parametric test, was employed for the data that does not meet this criterion.

For the measure of the magnitude of significant differences found in the comparison of mean scores or ranks, the researchers calculated the effect size for those differences by calculating the value of Cohen's d for the parametric data and eta square for the non-parametric data (Tomczak & Tomczak, 2014). The effect size was calculated to further justify the differences found in the comparison of mean scores across groups. Pairwise comparisons of scores or ranks were also conducted for the measures with significant differences.

FINDINGS AND DISCUSSION
Results for the independent variables
In the present study, the independent variables are the allocated time for writing and the number of syllables and words yielded by pupils in the experimental and control groups.

The analysis of the independent variables involved in the present study is presented in Table 2.

Table 2. Analysis of independent variables

Independent variables	Means of planning conditions			ANOVA		Location of significance: Scheffé ρ		
	PTP	OLP	NP	F	ρ	PTP-OLP	PTP-NP	OLP-NP
Length of time (min.)	20	19.077	20	1.149	.322	.426	1.000	.426
Words	101.731	113.692	104.615	.908	.408	.438	.953	.621
Syllables	127.077	144.115	131.423	1.154	.321	.349	.933	.555

The analysis shows that all three groups of pupils spent similar amounts of time on completing the task given. From the analysis of numbers of words and syllables, it can be seen the highest mean score is obtained by the OLP group (M=113.692, 144.115). Nevertheless, the analysis of the independent variables indicates that there was no significant difference in the mean scores across the three planning conditions in terms of the number of words and syllables produced.

Results for the Dependent Variables
Complexity. The measurement of pupils' language complexity comprises three components: 1) syntactic complexity, 2) syntactic variety and 3) lexical variety. The result for pupils' production in terms of language complexity is presented in Table 3 and Table 4.

Table 3. Analysis of syntactic complexity.

Dependent variable (Non-parametric)	Mean Rank			$\tilde{x}$	χ^2	df	P	η^2
	PTP	OLP	NP					
Syntactic Complexity	38.23	41.10	39.17	1.077	.224	2	.894	-

Table 4. Analysis of syntactic variety and MSTTR

Dependent variable (Parametric)	*M (SD)* of planning conditions			ANOVA		Location of significance: Scheffé ρ		
	PTP	OLP	NP	F	ρ	PTP-OLP	PTP-NP	OLP-NP
Syntactic Variety	13.538 (4.254)	14.654 (3.577)	14.000 (4.391)	.488	.616	.619	.921	.847
MSTTR	.772 (.041)	.783 (.047)	.772 (.042)	.514	.600	.676	1.00	.687

From the analysis of the Q-Q plots, box plots, skewness, and kurtosis, it is found that the data for the three complexity measures were in normal distribution. However, the results of Kolmogorov-Smirnov and Shapiro-Wilk tests show that the data in the PTP group for the syntactic complexity measure was not normally distributed. Hence, one-way ANOVA was employed to the measures of syntactic variety and lexical variety whereas Kruskal-Wallis H was used to analyse syntactical complexity.

The OLP group appears to be the group with the highest mean rank in syntactic complexity (see Table 3). However, a Kruskal-Wallis H test shows there was no significant difference in syntactic

complexity across the three groups χ^2 (2. N=26) = .224, ρ = .894.

The analysis indicates that the pupils in the OLP group yielded the greatest syntactic variety (M=14.654, SD=3.577). However, the differences in the mean scores were not significant (P=.616), showing that planning conditions did not have a substantial impact on pupils' syntactic variety (see Table 4).

Other than this, the result depicted in Table 4 shows that pupils in the OLP group (M=.783, SD=.047) produced more lexical variety compared with the other two groups. However, the difference in the mean scores across all planning condition groups (ρ =.600) is not significant.

Accuracy. The analysis of pupils' accuracy consists of considering error-free clauses and correct verb forms. From the analysis of visual checking of normality, it is found that the data from both

measures were distributed normally and there was no outlier detected in the data. Furthermore, the results from the Kolmogorov-Smirnov and Shapiro-Wilk tests ascertain that the data from both measures was normally distributed. Hence, one-way ANOVA tests were employed for both measures. The finding of the analysis of pupils' language accuracy is presented in Table 5.

The result tabulated in Table 5 illustrates that OLP (M=73.577, SD=15.568) allows pupils to produce the most accurate clauses. The analysis shows that planning conditions does not have a strong impact on pupils' language accuracy as the difference in the mean is not significant. The analysis of verb forms also indicated that the NP group (M=87.833, SD=9.049) outperformed the experimental groups. However, there is no significant difference found in the comparison of mean scores across groups.

Table 5. Analysis of learners' language accuracy

Dependent variable	M (SD) of planning conditions			ANOVA		Location of significance: Scheffé ρ		
	PTP	OLP	NP	F	ρ	PTP-OLP	PTP-NP	OLP-NP
Error-free Clauses	70.324 (14.837)	73.577 (15.568)	71.230 (16.940)	.293	.747	.760	.979	.867
Correct verb forms	84.111 (12.189)	84.258 (12.538)	87.383 (9.049)	.687	.506	.999	.586	.614

Fluency. In the present study, two types of measures were investigated, i.e., syllables per minute and word reformulation. In the assessment of data normality, there were some outliers found in the data measuring learners' word reformulation. The statistical evaluation of normality from the Kolmogorov-Smirnov and Shapiro-Wilk tests also discovered that the data collected for both measures were partially distributed in normal distribution. Due to these factors, the researchers decided to employ a non-parametric test (Kruskal-Wallis H) to analyse these two fluency measures. The decision is in accordance with the claim made by Frost (2015) that non-parametric tests should be used when the data contains ranked data, ordinal data or outliers that cannot be removed.

From the result obtained from the analysis of syllables per minute in pupils' texts, the researchers discovered that both planning groups produced texts with greater speed than the non-planning group. Overall, the PTP group significantly outperformed other groups in this measure, χ^2 (2. N=26) = 8.672, ρ = .013 with a medium effect size (η^2 = 0.113). Pairwise comparisons of the data using Mann-

Whitney U test also indicate that significant differences could be found between OLP and NP groups (ρ = .031) and between PTP and NP groups (ρ= .006).

Similarly, the analysis of dysfluencies shows that pupils from both planning condition groups produced fewer occurrences of word reformulation (see Table 6). In both planning groups, the PTP group demonstrated better fluency compared to the OLP group. Furthermore, the comparison of the three groups shows no significant difference, χ^2 (2. N=26) = 1.521, ρ = .467. This finding suggests that planning conditions have little effect on avoiding dysfluencies.

Results of the questionnaire surveys
In this study, the questionnaire surveys consist of two parts, i.e., pupils' cognitive engagement and their perceptions of their performance in the task. A reliability analysis validated the internal reliability of the questionnaire items. As indicated in Table 8, the reliability analysis demonstrates that the questionnaire survey was acceptably reliable (α=.760, N=12).

Table 6. Analysis of learners' language fluency

Dependent variable (Non-parametric)	Mean Rank			$\tilde{x}$	χ^2	df	ρ	η^2
	PTP	OLP	NP					
Syllables per minute	46.92	42.44	29.13	7.600	8.672	2	.013	0.113
Dysfluencies	35.60	39.56	43.35	.050	1.521	2	.467	-

Table 7. Pairwise Comparisons of syllable per minute using Mann-Whitney U test

Dependent variables: Syllables per minute	Pairwise Comparisons		
	PTP - OLP	OLP - NP	PTP – NP
Mann-Whitney U	296.500	220.00	186.500
Asymp. Sig, (2-tailed)	.447	.031	.006

Table 8. Analysis of pupils' focus in writing with reliability statistics

Mental Activities Involved	Mean Rank			$\tilde{x}$	χ^2	df	ρ	η^2
	PTP	OLP	NP					
Arranging Story	43.00	43.50	32.00	3	5.285	2	.071	-
Use of Words	42.65	40.67	35.17	3	1.678	2	.432	-
Sentence Construction	37.19	39.96	41.35	3	.535	2	.765	-
Grammar	33.71	45.06	39.73	3	3.758	2	.153	-
Studying Pictures	40.50	39.13	38.87	3	.085	2	.958	-
Studying Keywords	37.42	40.25	40.83	3	.375	2	.829	-
Translation	38.10	40.17	40.23	2	.159	2	.924	-
Considering Sentence Types	43.77	40.44	34.29	2	2.501	2	.286	-
Clarity	33.17	37.12	48.21	3	6.610	2	.037	.086
Making the Story Interesting	35.83	38.87	43.81	2	1.747	2	.417	-
Add Details	39.94	40.71	37.85	3	.254	2	.881	-
Spelling and Punctuation	34.65	40.42	43.42	2	2.150	2	.341	-
No. of Items				12				
Cronbach's Alpha				.760				

Before the decision of choosing parametric or non-parametric tests for data analysis, two normality tests (i.e. Kolmogorov-Smirnov and Shapiro-Wilk tests) had been carried out. The results of the normality tests show that the data collected were not normally distributed. Hence, the data for the first part of the questionnaire was analysed using the Kruskal-Wallis H test.

The analysis of the first part of the questionnaire survey is presented in Table 8. Based on the Kruskal-Wallis H test, learners did not show a significant difference in the mental activities they employed to approach the writing task, except for the effort of enhancing the clarity of the story χ^2 (2. N=26) = 6.610, ρ = .037, with medium effect size (η^2 = .086). Apart from this, pairwise comparisons using Mann-Whitney U test also revealed that the significant difference was found between PTP and NP groups (see Table 9). This part of the measure shows that learners tend to focus more on enhancing the clarity of writing when they do not have the chance to plan for their writing.

Table 9. Pairwise Comparisons of clarity as writing focus using Mann-Whitney U test

Focus in writing: Clarity	Pairwise Comparisons		
	PTP - OLP	OLP - NP	PTP – NP
Mann-Whitney U	309.500	247.500	202.000
Asymp. Sig, (2-tailed)	.587	.086	.010

Furthermore, pupils' perceptions of their performance were examined in the second part of the questionnaire. Similar to the first part of the questionnaire, the data collected in the second part of the questionnaire did not meet the requirement of normality. Hence, the data for the second part of the questionnaire was analysed using the Kruskal-Wallis H test as well. The result of the reliability statistics (see Table 10) shows that the items in this part are acceptably reliable (α=.743,N = 9).

From the results presented in Table 10, it is apparent that both planning conditions did not have any significant impact on their perception of the CAF of their performance. A closer look at the mean ranks obtained from the three groups also reveals that the OLP group had the highest mean rank for all the complexity and accuracy measures, whereas the NP group obtained the highest mean rank for most of the fluency measures. However, there was no significant difference observed in the comparison of all CAF measures in the second part of the questionnaire survey. Hence, it can be presumably concluded that planning conditions did not affect the pupils' perception of their performance.

Discussion
Effects of planning on complexity
From the results obtained from the analysis, it is noticeable that planning conditions did not affect pupils' complexity in writing significantly. In the present study, the results indicate that the OLP group performed slightly better than the other groups, but the differences were too small to be considered significant. This part of finding contradicts to Ellis and Yuan's (2005) finding which

indicated that on-line planning had a significant effect on learners' language complexity, especially in syntactical complexity. The findings, however, appear to be similar to Johnson et al.'s (2012) study in that pre-task planning had no impact on complexity. The potential explanations for the insignificant effects of planning on complexity include the pupils' proficiency level, the task type, as well as the way pupils perform writing tasks. As the pupils in this study were considered young learners, they might not have the proficiency needed to write complex sentences in English compared to older learners who have spent a longer duration of learning English. Furthermore, in the given task, the pupils might have restricted their creative use of words as some keywords were provided in the task. Although the provided words might have reduced the cognitive demands on the task based on Robinson's Cognition Hypothesis, the task did not elicit the production of complex sentences as the pupils relied mainly on the keywords to narrate the story. Moreover, the pupils in the present study might have written in simpler sentences to avoid making errors in their writing.

Table 10. Pupils' perception of their performance in complexity

Description	Mean Rank			$\bar{x}$	χ^2	df	ρ	η^2
	PTP	OLP	NP					
Complexity Measures:								
1. Ability to write long sentences	39.62	43.52	35.37	2.00	2.364	2	.307	-
2. Ability to use different words	39.56	43.27	35.67	2.00	.780	2	.677	-
3. Ability to use connectors and conjunctions	35.56	43.65	39.29	3.00	.591	2	.744	-
Accuracy Measures 1. Using correct words	37.33	42.83	38.35	2.00	.808	2	.668	-
2. Using correct grammar	37.65	42.63	38.21	2.00	.439	2	.803	-
3. Using correct tenses	39.02	42.56	36.92	3.00	1.733	2	.420	-
Fluency Measures 1. Smoothness in writing	36.25	39.79	42.46	2.00	3.925	2	.140	-
2. Quantity in writing	42.12	40.31	36.08	2.00	1.083	2	.582	-
3. Speed of writing	38.10	40.29	40.12	2.00	.315	2	.854	-
No. of Items				9				
Cronbach's Alpha				.743				

Effects of planning on accuracy

The analysis of accuracy comprises two parts, investigating pupils' use of 1) error-free clauses and 2) correct verb forms. For both accuracy measures, no significant difference was obtained from the comparison between the planning groups and the NP group. The finding shows that both types of planning had an insignificant impact on pupils' language accuracy in this study. This finding is in line with Piri et al.'s (2012) study which asserted that the influence of formal grammar teaching and learners' lack of familiarity with planning strategies might hinder the effectiveness of planning on language accuracy. Other than this, the finding shows young learners' incapability to make use of the extra time given to monitor and check their writing.

Effects of planning on fluency

In agreement with the proposition contended by previous researchers, the result of the fluency measures demonstrates that pupils in the PTP group yielded the most fluent essays compared with the other two groups based on the measure of syllables per minute. The difference in the data obtained between the PTP group and the NP group was also significant, suggesting that pre-task planning increases the pupils' fluency in writing (ρ = .006). In the measure of dysfluencies, it was found that the PTP group made the lowest number of corrections in writing. However, the mean score obtained by the group was not significantly different from the other groups.

The obtained results are in line with those obtained by Ghavamnia et al. (2013). The reason for this was that when the pupils planned before writing they engaged themselves mentally in understanding the story, organising the ideas that need to be presented and adding details to the characters and setting in the task. At this pre-task stage, the pupils in this study could be engaged in all the sub-processes of writing (task rehearsal) or focused on the planning sub-process (strategic planning). Therefore, in the actual writing process, they only needed to access the stored language which they have previously formulated, thus overcoming the limitation of working memory capacity. While performing the task, they could focus more on translating as they had attended to planning at the pre-task stage.

Other than pre-task planning, the study also discovered that pupils who engaged in on-line planning also produced more fluent story compared with the non-planning group. A pairwise

comparison between the data collected between the OLP and the NP groups also showed a significant difference (ρ = .031). This part of the finding showed that in this study, some pupils submitted their writing earlier than the time given to the pupils in the NP group. The finding from the pupils in the OLP group in their writing fluency also confirmed that some pupils did not make full use of their on-line planning time, which rendered them not to perform as well as expected in the complexity and accuracy measures.

Pupils' foci in writing under different planning conditions

From the results obtained in the present study, it is discovered that pupils in PTP, OLP and NP groups did not have much difference in their foci in writing. For instance, the present study shows that the pupils had similar degree of focus in arranging the story, use of words and studying the pictures provided as in the Kruskal-Wallis H test, there is no significant difference across groups of mean ranks reported in these activities. However, the pupils in the NP group tended to focus more on making their writing clear and comprehensible to their readers. This might be because, with the pressure of time, the pupils in the NP group needed more effort to express their ideas clearly to their target readers, in comparison with pupils in other groups which were given the opportunity and time to plan what they intended to express in both planning groups. Hence, pupils in the NP group appeared to have a more cognitive load to bear in the process of completing their writing, in comparison to the pupils in the planning groups who were given the time to plan their writing before or while performing the task.

The differences between pupils' perceptions and actual performance

As well as investigating the relationship between planning conditions and written performance, this study also examines the effects of planning on pupils' perception of their performance by comparing pupils' perception of their actual performance. Based on the questionnaire results, pupils in the OLP group obtained the highest scores in all the language accuracy and complexity measures. For the fluency items, mixed results are identified, showing that pupils in different planning groups perceived their written fluency differently depending on the particular aspect of fluency being asked about in the questionnaire. Overall, the findings show that pupils who performed the task without time pressure seem to have better perceptions of their performance, though the difference was not significant. This part of finding supports Ellis and Yuan's (2004) claim that the lack of time given to perform language tasks on-line may induce anxiety.

The analysis of the questionnaire survey results shows that pupils' perceptions of their writing performance do not fully reflect their actual performance, except for the complexity measures. In the comparison of complexity measures, even though non-significant differences are found in pupils' perception as well as actual performance, both of the findings indicate that OLP favours language complexity.

However, in the measures of accuracy and fluency, pupils' perception did not reflect their actual performance. Despite obtaining the highest mean rank in the perception survey, pupils in the OLP group only scored the highest in one of the accuracy measures in their actual performance. Similarly, mixed results were obtained in the perception survey regarding pupils' writing fluency, but in their actual performance, pupils in both planning groups significantly outperformed the NP group. This part of finding agrees with Carter's (2008) finding that perception of writing performance does not reflect actual performance.

Based on the comparison of pupils' perceptions with their actual performance, the present study shows that pupils' perceptions of writing are not reflective of their actual performance.

CONCLUSION

In sum, the results obtained in this study are slightly different from those obtained in previous studies on adult ESL writers. Nevertheless, they provide an important insight into how planning conditions impact young learners' written performance. The findings indicate that the primary school pupils can write more fluently if they have the chance to plan before writing. On the other hand, the present study also shows that planning has little effect on young learners' writing complexity and accuracy. This might be attributed to reasons such as pupils' foci on fluency when performing the task, pupils' language proficiency and pupils' unfamiliarity with planning strategies.

From the questionnaire survey carried out amongst the pupils, the finding demonstrates that pupils in non-planning condition have more significant cognitive load due to the time pressure. This finding supports the claim of limited capacity which maintains that manipulation of planning conditions can help writers to reduce their cognitive load.

Also, the current study revealed that pupils in different planning conditions perceived their writing performance differently and that their perceptions cannot be used to predict their actual performance.

The findings have several pedagogical implications. It is recommended that ESL teachers should teach pupils to plan their writing strategically, as we now know that pre-task planning enhances pupils' fluency in writing. Furthermore,

language teachers should also teach young learners to plan the accuracy and complexity as the present study has discovered a tendency to focus more on meaning. In tasks like note expansion, where keywords are provided, pupils can learn how to turn words into accurate and complex sentences. The findings of the study also appear to suggest that further research is needed to explore how other task types and the role of proficiency threshold can affect learners' language complexity and accuracy. Other than this, in writing assessments, the provision of time should also be considered as it is apparent that on-line planning has some effects on pupils' accuracy and complexity.
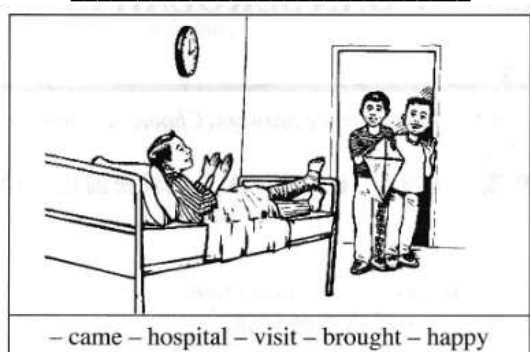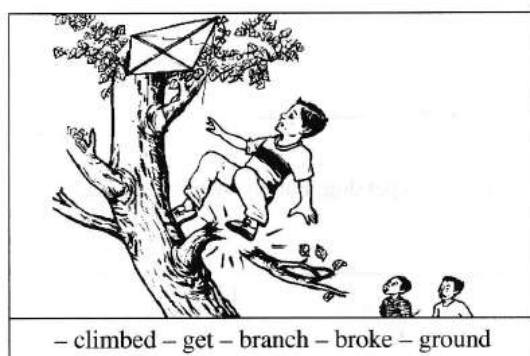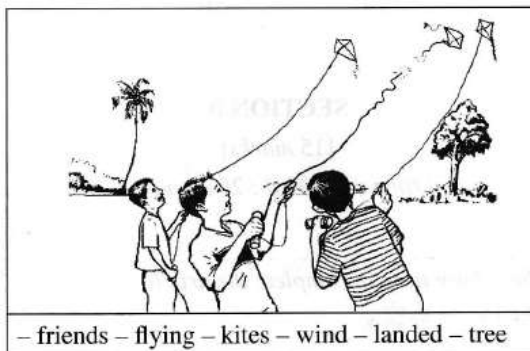
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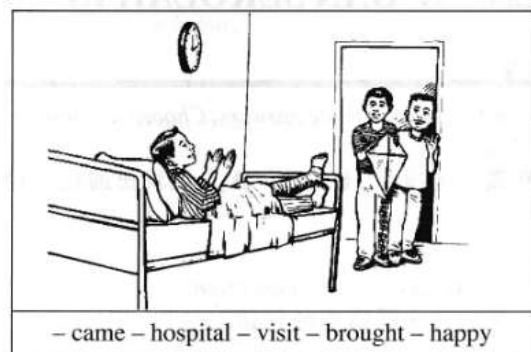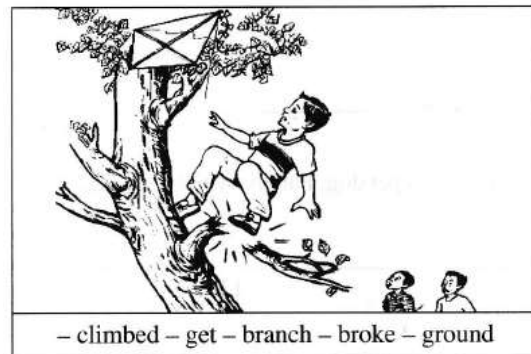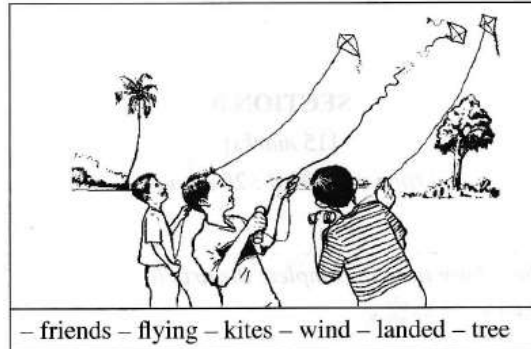**APPENDIX 1: NOTE EXPANSION TASK FOR THE PTP GROUP**
*The series of pictures below show an event. You **may** use all the words to describe the pictures. Write your answer in the space provided. You are given 5 minutes to plan your writing and 15 minutes to write on the answer sheets. When you plan your writing, please write on the planning sheet provided. You may not refer to your planning sheet when you perform the actual task .You may not erase everything you write in this task. If you want to do some correction/ alteration, you may just strikethrough the words you wish to change and write you correction on the top of the strikethrough words.*

– friends – flying – kites – wind – landed – tree

_____
_____
_____

– climbed – get – branch – broke – ground

_____
_____
_____

– came – hospital – visit – brought – happy

_____
_____
_____

Remark: The task is adapted from the actual UPSR exam paper in 2012.

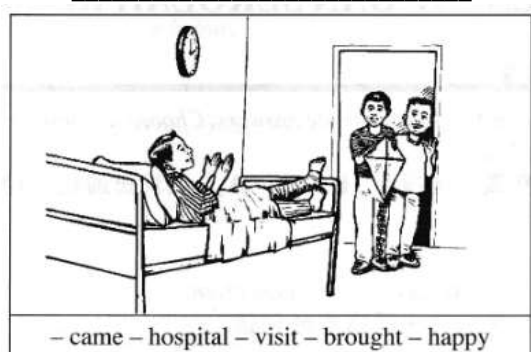**APPENDIX 2: NOTE EXPANSION TASK FOR THE OLP GROUP**
*The series of pictures below show an event. You **may** use all the words to describe the pictures. Write your answer in the space provided. You may take as much time as you need to complete the task but the time limit is 35 minutes. You have to write how much time you spent in completing you task at the upper right corner. You may not erase everything you write in this task. If you want to do some correction/ alteration, you may just strikethrough the words you wish to change and write you correction on the top of the strikethrough words.*

– friends – flying – kites – wind – landed – tree

_____
_____
_____
_____

– climbed – get – branch – broke – ground

_____
_____
_____
_____

– came – hospital – visit – brought – happy

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Remark: The task is adapted from the actual UPSR exam paper in 2012.

APPENDIX 3: NOTE EXPANSION TASK FOR THE NP GROUP
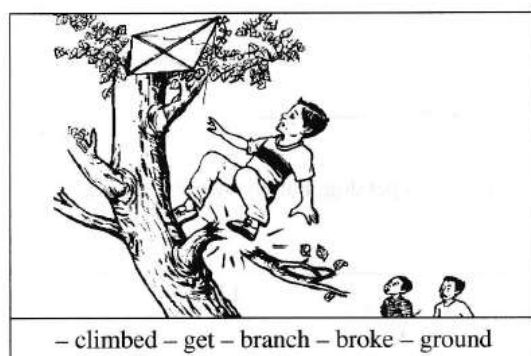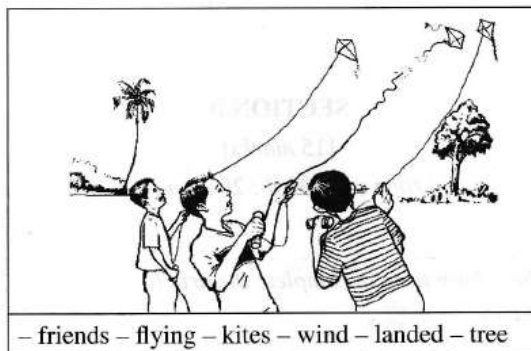*The series of pictures below show an event. You **may** use all the words to describe the pictures. Write your answer in the space provided. You are allowed to finish your writing in 20 minutes. You may not continue your writing once the time is up. You may not erase everything you write in this task. If you want to do some correction/ alteration, you may just strikethrough the words you wish to change and write you correction on the top of the strikethrough words.*

– friends – flying – kites – wind – landed – tree

_____
_____
_____
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– climbed – get – branch – broke – ground

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– came – hospital – visit – brought – happy

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Remark: The task is adapted from the actual UPSR exam paper in 2012.

APPENDIX 4: QUESTIONNAIRE FORM 1

Dear pupil,

同学们，

Please rate how you agree with each of the statement given.

请为各说明打分。

From the note expansion you did just now, did you…… 你是否在刚才的英语写作中	绝对不赞同	不赞同 Disagree	没意见 Neutral	赞同 Agree	绝对赞同 Highly Agree
1. Try to arrange the story in the correct order? 尝试组织故事内容？	0	1	2	3	4
2. Think about the words that you can use in your writing? 在写作之前，先想你会用什么字？	0	1	2	3	4
3. Think of how to make sentences? 想如何造句？	0	1	2	3	4
4. Think of the grammar? 考虑语法的问题？	0	1	2	3	4
5. Study the pictures carefully? 仔细地观察图片？	0	1	2	3	4
6. Study the keywords carefully? 仔细地观察所给的关键字？	0	1	2	3	4
7. Try to translate words from your mother tongue to English? 尝试用自己的母语（华语或国语）翻译成英语？	0	1	2	3	4
8. Consider the kind of sentences you wished to use? (Passive, active, etc) 考虑自己要用的句型（把字句被字句等）？	0	1	2	3	4
9. Try to be clear? 尝试让自己的作文写得清晰易懂？	0	1	2	3	4
10. Try to make the text interesting? 尝试让自己的作文写得生动有趣？	0	1	2	3	4
11. Add details? / Trying to make your writing longer? 加上额外的资料？/想如何加长自己的作文？	0	1	2	3	4
12. Check spelling and punctuation? 检查自己的拼写与标点符号的运用？	0	1	2	3	4
13. Others (Please state) 其他（请说明）	0	1	2	3	4

APPENDIX 5: QUESTIONNAIRE FORM 2

Questionnaire form – Planning in narrative essay writing.

Gender 性别:

Age 年龄:

Please rate each statement.

请为各说明打分。

	Totally Disagree 完全不赞同	Disagree 不赞同	Not Sure 不确定	Agree 赞同	Totally Agree 完全赞同
SECTION A: Writer's Fluency A 部分：语文流利程度					
1. I could do the note expansion task smoothly. 我可以很顺利地完成英语写作。	0	1	2	3	4
2. I could write a lot in the task. 我可以在刚才的写作中写得很多。	0	1	2	3	4
3. I could write fast in this task. 我可以很快的完成刚才的英语写作。	0	1	2	3	4
SECTION B: Writer's Accuracy B 部分：语文精准度					
1. I could use words correctly in this task. 我能够在刚才的任务中运用正确的字眼。	0	1	2	3	4
2. I could write with correct grammar. 我可以用正确的语法写作。	0	1	2	3	4
3. I could use tenses (present tense, past tense and future tense) correctly. 我可以很准确的运用各时态动词（过去式、现在式）	0	1	2	3	4
SECTION C: Writer's Complexity C 部分：语言的复杂性					
1. I could write long sentences in the task. 我可以写很长的句子。	0	1	2	3	4
2. I could use many different words in a sentence. 我可以在一个句子用不同的字眼。	0	1	2	3	4
3. I wrote sentences using connectors and conjunctions (and, so, furthermore, besides that, because, so and etc) 我在写作中运用了各种连词与连接词（如：和、所以、此外、除此、因为等等）	0	1	2	3	4