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The effect of a narrative structure and English proficiency on university students' speaking performance: Pausing patterns

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ABSTRACT

Literature has shown that a narrative structure and narrative complexity factor into the speaking performance of L2 learners, especially those of lower-proficiency level of various L1 backgrounds (e.g., see Tavakoli & Foster, 2008). However, little research has looked at the issue with Indonesian-speaking learners of English. In order to fill this empirical void, this study examines the relationship between a narrative structure, English proficiency (intermediate and upper-intermediate), and the distributions of mid-pause of English students when performing a picture-assisted story narration task in English. Informed by a quantitative approach, data were collected from spoken texts drawn from a picture-assisted narrating task of 40 participants majoring in English at a university in Indonesia. The participants' speeches were transcribed, and the mid-pauses produced by the participants were analyzed using a paired t-test. The English proficiency levels were determined by a standardized TOEFL-equivalent test the participants took at a language center. Results reveal that (1) the participants produced more mid-pauses when performing a tight structured narrative, and (2) they with different language proficiencies, intermediate and upper-intermediate, paused differently. That is, the oral performance of the intermediate-level participants was affected by a narrative structure, while that of the upper-intermediate peers was not influenced by that structure. These results may encourage language teachers and language testers to formulate certain strategies to enhance learners' oral fluency by considering the effect of a task design on students' speaking performance.

Keywords: English; Indonesian learners; mid-pause; narrative structure; proficiency level

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INTRODUCTION

Native speakers of a language seem to deliver a speech spontaneously, smoothly, appropriately, effectively, and effortlessly. Even though their speech may exhibit a problem in terms of content and message appropriateness (Temple, 1992), hesitations and repairs (Bortfeld, Leon, Bloom, Schober, & Brennan, 2001), as well as pauses (Davies 2003; 2012), it is perceived as fluent (Pinget, Bosker, Quené, & De Jong, 2014). In contrast, fluency in second language (L2) is problematic (Riggenbach, 1991) due to numerous factors; two of which are accuracy and lexical diversity (see De Jong, Steinel, Florijn, Schhoonen, & Hulstijn, 2013). For instance, hesitation among L2 learners is perceived to be obvious to the listeners of a target language (Temple, 1992). The L2 learners lack the ability to pause or hesitate in a target language in the same the way native speakers do (Kahng, 2014; Skehan, 2009). In short, oral fluency is one of the most salient speech features that differentiates L2 speech production from that of L1 (Pinget, Bosker, Quené, & De Jong, 2014).

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Fluency, as proposed by Skehan (1999 in Skehan & Foster, 1999), falls into two types: breakdown fluency (number and duration of pause) and repair fluency (repetition, false start, reformulation, and replacement). Compared to other measurements, a pause is a major indicator of fluency of a language because it exerts influence on all temporal variables used to measure fluency (Götz, 2013). Pauses especially at clause boundaries are a prototypical feature of a natural speech even among very fluent speakers (Pawley & Syder, 1983 in Xhafaj, 2006). The clause boundary appears to be a natural locus to anticipate next utterances (Skehan, 2009). Research on pauses (Davies, 2003; Kahng, 2014; Goldman-Eisler, 1968; Skehan, 2009) reveals that there is a specific domain of the clause boundary where native speakers slow down. Goldman-Eisler (1968), for instance, found that L1 speakers paused more at the beginning and end of a clause rather than within clause. Also, their pause duration at the beginning and end of a clause was significantly longer rather than the within clause. This accords with Davies' (2003) argument that where pauses occur discriminates native and non-native speech. Further, Skehan (2009) and Kahng (2014) posited that native speakers and non-native speakers differ from each other in particular in mid-clause pausing; non-native speakers more frequently pause a mid-clause, while native counterparts do so least frequently.

In the case of English as a second language, pause within clauses, or mid-pause, is one aspect that distinguishes the fluency of L1 speakers from that of L2 learners. The claim stems from the findings of several comparative studies of different L1 backgrounds, such as Russian (Rianzantseva, 2001), Brazilian-Portuguese (Xhafaj, 2006), and various L1 backgrounds based in London (Tavakoli, 2010) and Thai (Isarankura, 2013). These studies show that one factor that differentiates L1 speakers from L2 learners is the inappropriate location of pauses: L1 speakers pause more at clause boundaries while L2 learners tend to pause within clauses. The findings also indicate that the higher the English proficiency of the speakers is, the less they produce a mid-pause in their speech.

A narrative structure, the order of events in a story, has a bearing on the fluency of L2 learners (Tavakoli & Foster, 2011). Unlike that of L2 learners, the speaking performance of native speakers is found to be unaffected by a narrative structure (Foster & Tavakoli, 2009). The order of events can be loose or tight. A loose structured story can be narrated without following the order of events, and the story still makes sense. On the other hand, the events of a tight structured story are clear from the beginning, to the middle, and to the end. This type of a narrative structure is also called a problem-solution structure (Tavakoli, 2009). It is found that a tight structured narrative is associated with a more fluent performance (Skehan & Foster, 1997; Tavakoli, 2009; Tavakoli & Foster, 2011).

There are several issues that are not yet observed in the previous studies mentioned earlier. First, scanty attention has been paid to the Indonesian learners of English. Second, knowledge of how learners of different levels of language proficiency handle a task demand has received little attention. It was only the intermediate-level students reported in the previous studies. Third, extant studies mostly used a cut-off point of 1 sec (Foster & Skehan, 1996; Skehan & Foster, 1997; Foster & Skehan, 1999) and 400 ms (Foster & Tavakoli, 2009; Tavakoli, 2009; Tavakoli & Foster, 2011). By contrast, the investigation of a cut-off point by De Jong & Bosker (2013) shows that pauses between 250-300 ms are very positively correlated with L2 proficiency, while those of other ranges, i.e. below 150 ms and above 300 msshow a lower correlation. It may indicate that a cut-off point of 250-300 ms offers a new insight into the relation between pause distribution and a narrative structure.

Thus, this study sought to investigate the issues mentioned above. In particular, it looked at the relationship between a narrative structure, English proficiency, and mid-pause made by Indonesian learners of English. By examining the relationship between a mid-pause distribution, a task design, and different English proficiency levels in an Indonesian EFL classroom context, not only can we identify how Indonesian learners pause while performing an English speech, but we can also gauge the extent to which such a factor as a task design, can influence the speaking performance of different groups of learners. Informed by the previous studies (Foster & Tavakoli, 2009; Skehan & Foster, 1997; Tavakoli, 2009; Tavakoli & Foster, 2011), we hypothesize that (1) a narrative structure affects the learner's speech production of mid-pause: L2 learners pause less frequently in the middle of clauses with a tight structured story than they do with a loose structured story; and (2) speaking performance of L2 learners with higher English proficiency is not affected by a narrative structure compared to that of L2 learners with lower English proficiency.

METHOD

Following Tavakoli & Foster (2011), this study applied a quantitative approach since its main goal was to examine the relationship among variables in line with the nature of a quantitative study (Creswell, 2008). In particular, the present study sought to investigate the distribution of a mid-pause in different narrative structures and different English proficiency levels. There are two controlled variables: a narrative structure and English proficiency as well as one dependent variable, the distribution of a mid-pause. These variables were then examined to see to what extent the independent variables affect the dependent variable.

Participants

The participants of the study were 40 (16 males, 24 females) students majoring in English Education. This cohort of the students took a TOEFL-like test at a

nationally-accredited language center in a university in West Java, Indonesia. Based on their English score, the participants were grouped into two: Intermediate and upper-intermediate. Those with the score range of 525 to 542 belonged to the intermediate group (B1 equivalent in CEFR) while those with 543 to 626 were categorized as the upper-intermediate group (C2 equivalent in CEFR). The intermediate-level students were recruited since previous studies were primarily concerned about this level of English proficiency. The students with the upper-intermediate level was also recruited to see whether a narrative structure affects the speaking performance of English learners with a higher proficiency level It is of empirical interest to see if the pauses made by the upper-intermediate learners pattern like those of native speakers.

Data collection: Tasks

The participants carried out a picture narration task adopted taken from Foster & Tavakoli (2009) and Tavakoli & Foster (2011). This type of task has been widely used in L2 research because it is a pedagogic task for educational purposes, such as teaching, learning, and assessment (Tavakoli, 2010). Moreover, it is a monologic task which allows speakers to produce a stream of speech without interruption from the others. In this task, a visual medium, a series of pictures (n = 6), was used to construct a story. The students told different stories, such as *Picnic and Football* (Heaton, 1966), *Journey* (Jones, 1980), and *Walkman* (Swan & Walter, 1990). The stories constructed by the students had different characteristics in terms of its structure and complexity. The structure here refers to a tight structure and a loose structure; the complexity has to do with the absence of background information in the story. It should be noted that task complexity goes beyond the scope of the present research.

Table 1. The characteristics of instruments

Narrative Complexity	Narrative Structure	
	Loose	Tight
Foreground information	Journey	Football
Foreground and Background Information	Walkman	Picnic

The Journey has a loose structure and only foregrounded events in the story. The loose structure refers to the sequence of events that are not really clear and somehow arbitrary (Tavakoli, 2009). However, the absence of background events in the story asks for less explanation, and thus the speaker can just describe the main event of one picture and move on to the next (Bardovi-Harlig, 1992). Speakers that perform the Journey demonstrate a relatively low accuracy and low syntactic complexity (Tavakoli & Foster, 2011). On the other hand, the structure of the Walkman is similar to that of the Journey, but it has background information in each picture in the story. It stimulates the speakers to produce more subordinate conjunctions in order to connect the background information to the foreground information (Harris & Bates, 2002). Thus, speakers that perform the Walkman exhibit relatively low accuracy but high syntactic complexity and fluency (Tavakoli & Foster, 2011). The two other picture stories, the Picnic and Football, both have a tight structure. Since the sequence of events is straightforward from the beginning to the end, the speaker shifts their attention into accuracy and fluency (Tavakoli, 2009). The difference between the two stories lies in the absence of background; the Picnic presents both foreground and background information, and the Football merely presents foreground information. As explained above, the presence of background information encourages the speaker to produce more conjunctions to connect the background to the foreground event. Thus, speakers that perform the Picnic produce relatively higher accuracy and syntactic complexity; speakers that perform the Football exhibit relatively higher accuracy but low syntactic complexity (Tavakoli & Foster, 2011).

With regard to data collection, the participants were asked to select any picture story that they wished to narrate first. They were given about five minutes to make sense of the picture story and to plan what they were going to narrate for each picture. Their oral performance was then recorded. It took about thirty minutes for each participant to finish all the tasks.

Data Analysis

There were 160 sound files taken from 40 participants. The sound files were then converted into wav file and analysed in the PRAAT software (Boersma, 2001; Boersma & Weening, 2016). First, the silence above 250 ms (De Jong & Bosker, 2013) was identified automatically by PRAAT. Figure 1 illustrates how a piece of data is displayed on PRAAT.

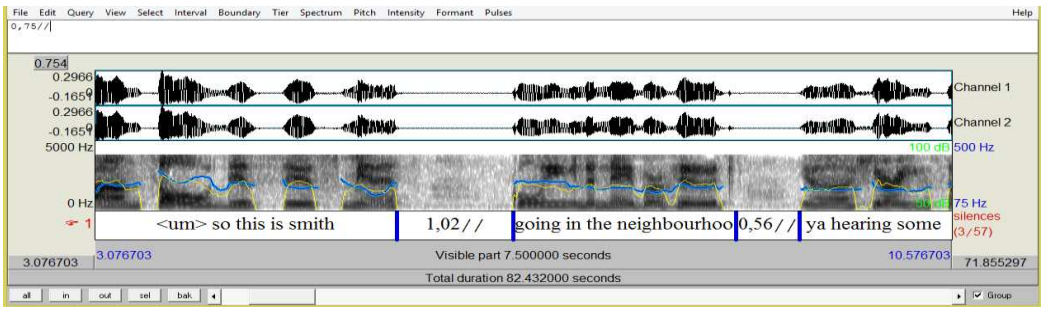

Figure 1. PRAAT transcription

Then, the speech was segmented into clauses, following Foster et al. (2000). After that, the pauses occurring in the middle of clauses were counted. The number of pauses occurring in each speaker was divided into the duration of their speech (De Jong, 2013). Afterwards, the data were divided into intermediate and upper-intermediate groups. Last, a paired t-test was employed to compare the mean scores in each group (Kranzler & Moursund, 1999).

For data analysis, several steps were taken. Firstly, a descriptive analysis was conducted (Creswell, 2014) to enumerate the trends of the data, including general tendencies (mean, mode, median), the spread of scores (variance, standard deviation, and range), and a relation of one score towards all others (z scores, percentile rank). In order to see the normality of the data distribution, the Kolmogorov-Smirnov test was administered. Afterwards, an inferential statistics was deployed (Creswell, 2014) to see the probability of the influence of a narrative structure on L2 output. The study used a paired t-test to compare the mean score in a similar group (Kranzler & Moursund, 1999). In all groups, the mid-pause produced in a loose structured story was compared to that in a tight structured one. The mean comparisons were made separately. As can be seen in Table 1., the Picnic task and the Football task (tight) were compared to the Walkman task and the Journey task (loose). Since the background variable was present in the Picnic and the Walkman, the investigation was then separated according to the presence and the absence of the background variable. More specifically, the Picnic was compared to the Walkman because of the presence of background information in both stories, while the Football was compared to the Journey due to the absence of background information in both stories.

RESULTS

This study aims to examine to which extent a narrative structure (loose and tight), English proficiency (intermediate and upper-intermediate groups of students) have a bearing on the distribution of mid-pauses produced by Indonesian learners of English As mentioned earlier, the two hyphotheses examined in this study are (1) whether a narrative structure affects the learner's production of mid-pauses in narrating a series of picture-based stories and (2) whether mide pauses produced by the L2 learners with higher English proficiency is not affected by a narrative structure compared to that of L2 learners with lower English proficiency. The results of the study are presented based on these two hypotheses.

Hypothesis 1: The relationship between a narrative structure and mid-pause production in a picture narration task

To begin with, Hypothesis 1 predicted that L2 learners that performed a picture narration task with a tight structure would produce fewer mid-pauses compared to the one with a loose structure. This is because a tight structured narrative encompasses events that are clear throughout the story, thus creating less processing burden on L2 learners (Tavakoli & Foster, 2011). This hypothesis was rejected by the findings of this study. It was found that a narrative with a tight structure was associated with L2 learners producing more mid-pauses than a narrative with a loose structure. A paired t-test indicated that scores were significantly higher for the tight structure (Football) (M=12.6, SD=4.22) than for the loose structure (Journey) (M=10.0, SD=2.97), $t(40)=4.4$, $p<.001$. This result suggests that a narrative structure affected the distribution of mid-pauses in the speech produced by Indonesian learners of English. The tight structured narrative was associated with the L2 learners producing more mid-pauses, while the loose structured narrative was associated with the L2 learners producing fewer mid-pauses. The result of the paired t-test is presented in the following table.

It is worth noting that drawing on the paired t-test above, scores of the all participants for the Walkman (M=10.3, SD=3.92) were not statistically different from those for the Picnic (M=10.1, SD=3.40), $t(40)=-.30$, $p=.769$). In other words, the participants produced a similar number of mid-pauses when performing the Picnic and the Walkman.

Table 2. Mean comparison of different narrative structures

Narrative Complexity	Task	Narrative structure	Mean	T	P
Foreground and Background	Picnic	Tight	10.1	-.2	.769*
	Walkman	Loose	10.3		
Foreground	Football	Tight	12.6	4.4	.000*
	Journey	Loose	10.0		

The results above can be explained by considering the presence/absence of background information in the narrative. As Table 2 shows, when background information was embedded in the narration task, there was no significant difference between the mean scores of Picnic and Walkman. However, when background information was absent in the narration task, the difference of the mean scores was significant. This finding can be explained from a cognitive perspective (Schmidt, 1990). This suggests that the participants had limited attention resources; they could only pay attention to one or two aspects of language, and this consequently impacts their performance. It seems that the presence of background information adds more burden on the participants, and they had no attention resources available for noticing the different structures of a picture narration task. Tavakoli and Foster (2011) also found that the addition of background information

shifts L2 learners' attention to produce more complex syntactic language. However,
the syntactic complexity is not analysed in this study.

However, this finding contradicts what Skehan and Foster (1997), Tavakoli (2009), and Tavakoli and Foster (2011) found that there is a positive association between fluency and the tightness of a narration task. They found that L2 learners distributed relatively fewer mid-pauses when performing a tight structured narrative. Expectedly, L2 learners would distribute more mid-pauses when performing the Journey task than the Football task.

In the Journey task, the characters of the story mainly did one activity per picture, and then they moved to another activity in the next picture. In this picture-based narrative story, each event was separated from each other. Some characters were cycling, chatting in a café, swimming, and having dinner. Each picture in the story can be narrated randomly and the story still makes sense. As a result, it creates the impression of unclear sequence. Tavakoli & Foster (2011) argue that it stands for the reason of higher mean scores in Journey task. From a cognitive perspective (Schmidt, 1990), it is argued that an unclear sequence of a narrative asks more of the learners to find the connection between picture stories. When a learner gives more attention to find the organization of the story, other aspects of language are left behind. It is because learners have limited attentional resources, which means that focusing on one aspect will cost the decreasing score of other aspects. Since a loose structured narrative is hypothetically more demanding for the learners, it adds the processing burden and shifts their attention away from fluency.

Meanwhile, the order of events in the Football task could be identified directly by the speakers at the first glance. There was an introduction of the story in the first picture where a group of boys were playing football in the yard. Then the story moves into the problem, where the ball fell into a hole and no one could reach it. After that, the solution was presented in the 5th picture, where one of the boys brought a bucket of water to make the ball float to the ground. The last picture showed the end of the story where the ball could finally be taken and even the participants draw a conclusion that the group of boys could play football again. This indicates that the clear sequence of the story releases L2 learners's attentional resources to find the development of the story. Tavakoli & Foster (2011) argue that it stands for the reason of greater mean scores in Football task. Since there is no need to find the connection between each story line, the L2 learners have more attentional resources to be used in other aspects of language such as fluency.

Looking at the contrastive findings between this study and previous studies, it is probably safe to say that the difference is caused by different cut-off point adapted in the study. Tavakoli & Foster (2011) and Tavakoli (2009) used 400 ms, Skehan & Foster (1997) used 1000 ms or more, while this study adopted a lower cut-off point which was 250 ms. The decision to use a 250 ms as a cut-off point was based on De Jong & Bosker (2013), who found that pauses between 250-300 ms showed the highest correlation with L2 proficiency. They also suggested that counting pauses below 250 ms or above 300 ms would result in lower correlation, and the measures of fluency would be less representative of L2 proficiency. Thus, it may indicate that the measures of fluency on previous studies are less representative of L2 proficiency. As a result, different findings emerge; that is, a tight structure is not associated with higher fluency in this study. Thus, the contrast between the finding of the present study and those of previous ones may be attibuted to the adaptation of different cut-off point in each study. However, this claim needs a further investigation.

Hypothesis 2: The relatioship between narrative structure and different English proficiency levels in a picture narration task

Hypothesis 2 predicted that the performance of L2 learners with higher English proficiency is not affected by narrative structure compared to lower English proficiency. The prediction was borne out by the findings. There was no significant difference of the distribution of mid-pause made by the upper intermediate learners in tight and loose structured narration taks. In more detail, findings demonstrate that the two groups performed differently. A paired-samples t-test from each group indicates that Intermediate group was significantly affected by narrative structure (t(23)=3.2, p=.004) while the performance of Upper Intermediate group was not affected (t(17)=3, p=.009). The results of paired t-test are presented in Table 3 and 4 below.

Table 3. Intermediate group (<542) (n=23)

		Mean	SD	t	p
(+)Background	Picnic (tight)	10.2	3.73	-.2	.806
	Walkman (Loose)	10.4	4.28		
(-)Background	Football (tight)	13.7	4.32	3.2	.004*
	Journey (Loose)	11.1	2.59		

Table 3 shows that the mean scores of the Intermediate group were not significantly different for Picnic (*M*=10,2, *SD*=3.73) and Walkman (*M*=10.4, *SD*=4.28), t(23)=-.249, p=.806. In contrast, the scores were significantly different for Football (*M*=13.7, *SD*=4.32) and Journey (*M*=11.1, *SD*=2.59), t(23)=3.2, p=.004,.. Meanwhile, with the upper-intermediate group, the scores were not significantly different for Picnic (*M*=10.0, *SD*=3.00) and Walkman (*M*=10.2, *SD*=3.50), t(17)=-.2, p=.867. Unlike that of the previous

groups, the scores were also not significantly different for Football (*M*=11.2, *SD*=3.70) and Journey (*M*=8.5, *SD*=2.82), t(17)=3.0, p=.009.

The above results suggest that for the L2 learners with upper-intermediate level, the demands of the two tasks are similar. It seems that narrative structure does not affect the distribution of mid-pause of learners with upper-intermediate level. Foster & Tavakoli (2009) reported that native speakers are not affected by narrative structure the way L2 learners do. It seems that the narrative structure appears to be associated with different degrees of English proficiency. Foster & Tavakoli (2009) used L1 speakers, whose proficiency was taken for granted, while Tavakoli & Foster (2011) used L2 learners who were intermediate learners of English. From those two studies, one may suggest that the higher the English proficiency of speakers is, the less narrative structure could affect their performance.

Table 4. Upper intermediate group (>542) (n=17)

		Mean	SD	T	p
(+)Background	Picnic (tight)	10.0	3.00	-.2	.867
	Walkman (loose)	10.2	3.50		
(-)Background	Football (tight)	11.2	3.70	3.0	.009
	Journey (Loose)	8.5	2.82		

The finding of this study corroborates what Foster & Tavakoli (2009) and Tavakoli & Foster (2011) found. There is a significant difference between the mean scores of mid-pause in picture-based stories with a loose and tight structure produced by the upper-intermediate participants. What is of special interest, the pausing patterns of the L2 learners of Upper Intermediate level was identical to those of L1 speakers as reported by Foster & Tavakoli (2009). This may suggest that narrative structure only affects L2 learners with a lower level of English proficiency. In other words, the higher the level of English proficiency is, the more likely the speaking performance is unaffected by narrative structure. However, further studies on elementary and advanced levels English proficiency and its association with pausing patterns and a narrative structure need to be conducted to further validate this claim.

CONCLUSION

There are two contibutions of the present study to the existing literature on a task design and oral fluency. First, contrary to what has been reported in previous studies (Skehan & Foster, 1997; Tavakoli, 2009 Tavakoli & Foster, 2011), this study revealed that a tight structured narrative was associated with L2 learners producing more mid-pauses in a picture narration task. Further research is imperative to see whether the results of this study can be extended to other Asian contexts. Second, the results also lend support to the effect of English proficiency on the production of mid-pauses in different narrative structures (Tavakoli & Foster, 2011). It was found that the speaking performance of L2 learners with the intermediate level of English was affected by a task structure, while that of the upper--ntermediate level was unaffected. In other words, the task structure may only affect L2 learners with a lower level of English proficiency. Noteworthy is the fact that the speaking performance, in this case the production of midpauses—of the upper-intermediate group patterned like that of L1 speakers, where the narrative structure did not affect their speaking fluency (Foster & Tavakoli, 2009). Pedagogically, as alluded to by Bygate (1999), the results of the present research that tasks are associated with learners' fluency may encourage English teachers to consider a task design or a narrative structure in teaching oral skills in order to improve learners speaking proficiency (Candlin, 1987; Samuda, 2001; Skehan, 1998).

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