

# Japanese English at the University Level: Dysfluency Analysis

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# Learner speech dysfluency

1. Cutoff

<cut></cut>

2. Repeat

<repeat></repeat>

3. Repair

<repair></repair>

4. Reformulation

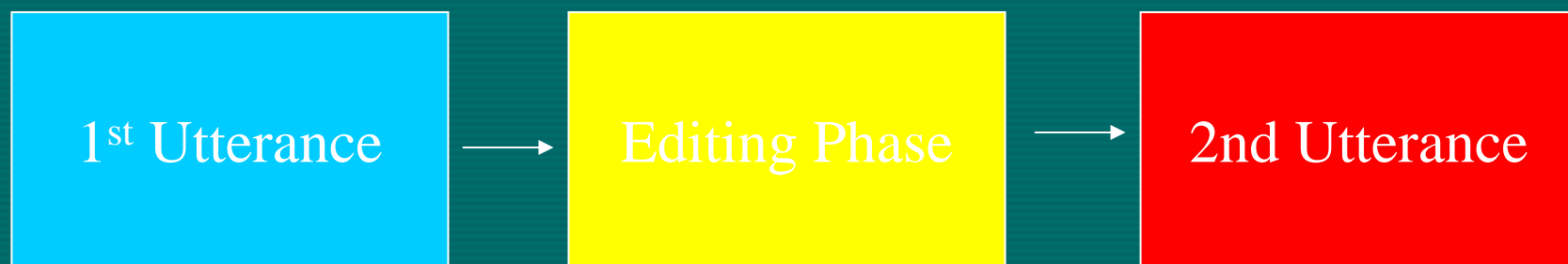
<reform></reform>

(e.g., Maclay and Osgood 1959, Levelt 1983,  
Green and Hecht 1993, Olynak et al. 1990)

# How to tag the data

- I go to, <./> <repeat> I go to </repeat>  
museum museum, or amusement
- because there is<F>er</F> <repeat>  
there is </repeat> a big clock.

# Learner speech dysfluency



**1<sup>st</sup> partial Utterance:** A speaker monitors the utterance and notices that it needs to be modified.

**Editing Phase:** (without a pause, a silent pause, a filled pause)

**2<sup>nd</sup> Utterance:** the modified utterance is uttered (successful repairs or reformulation) or S gives up modification ( repeat)

# Cutoff:

- Only the initial part of the word is pronounced before the whole word is pronounced.
- e.g., basically Shizuoka people **i**, is, a, same as Tokyo, Tokyo's people.  
e.g., **li** . mm. . Literature books.  
e.g., The problem **ex**, exist here.

# Repeat (1):

- 1) The word is repeated without any additional elements.

e.g., . . . went to the movies, **movies**.

- 2) The word is repeated with some additional elements.

e.g., I . . . **I like music**

# Repeat (2):

- 3) The chunk is repeated without any additional elements.

e.g., I did it. **I did it.**

- 4) The chunk is repeated with some additional elements.

e.g., I have to . . . **I have to go there**

# Repair:

- 1) One word or a part of the chunk is modified (replaced).

e.g., I am sad . . . **was** sad, I get nervous. . . **got** nervous,

at my house. . . at **her** house, I decide to go . . . I **decided** to go

- 2) The whole chunk is modified.

e.g., one year . . . **almost one year**, I'm . . . **maybe I'm greedy**



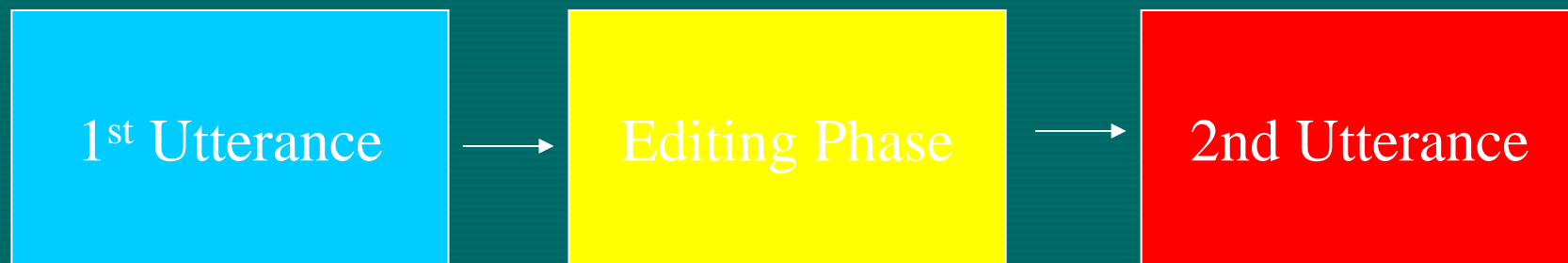
# Reformulation:

- The previous statement is retracted and a new sequence of words is produced.

e.g., I took . . . uh . . . **it took me one hour**

did you go . . . uh . . . **was that a good movie?**

# Learner speech dysfluency



**1<sup>st</sup> partial Utterance:** S notices that the utterance needs to be modified

**Editing Phase:** (without a pause, a silent pause, a filled pause)

**2<sup>nd</sup> Utterance:** the modified utterance is produced  
(cutoff, repeat, repair, reformulation)

# Editing Phase

1. Without a pause
2. A silent pause
3. A filled pause

3.1. Non-lexical Fillers (e.g., *uh, ah, um*)

3.2. Lexical Fillers (e.g., *well, I mean, that is*)

3.2. Drawls (e.g., *a::i[I], tu::::: [to]*)

3.3. Addition of Unnecessary Vowels

(e.g., *I findoo, I think thatoo*)

# 1. Without a pause <repeat>



- I haven't, <repeat>I haven't been to Osaka </repeat>, <repeat>not</repeat>, <F>er</F>, not so many. <F>Er</F>,

## 2. A silent pause <repeat>



- I go to <./> <repeat> I go to </repeat>, museum museum, or amusement park

# 3. A filled pause

## 3.1. Non-lexical fillers <repeat>

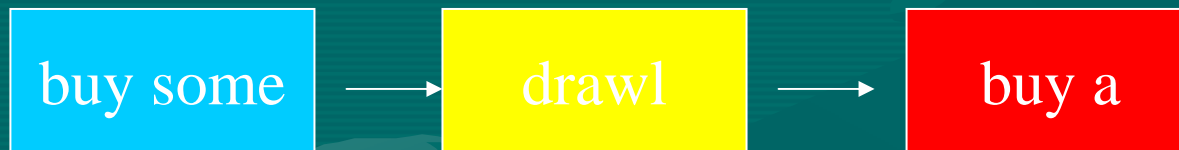


- And, <./> ah, the time is seven o'clock because <repeat>there is</repeat>, <F>er</F>, there is a big clock. I can see it.

## 3.2. Drawls <repeat><repair>



- but uh once er you:::, <repeat> you  
</repeat> <./> have



- she wanted to buy<./> some <repair>buy  
a present for her husband </repair> ,

## 3.3. Lexical fillers <repair>



- I decide, well, <repair>I decided</repair> to go to museum.



## 3.4. Addition of unnecessary vowels



I only use my computer mm to, mm, to  
make u::: <repair>to do </repair> <./>  
the E-mail.

# Research Question (1):

- Among the learner speech dysfluency, i.e., cutoff, repetition, repair, and reformulation, which was most frequently used in this corpus?

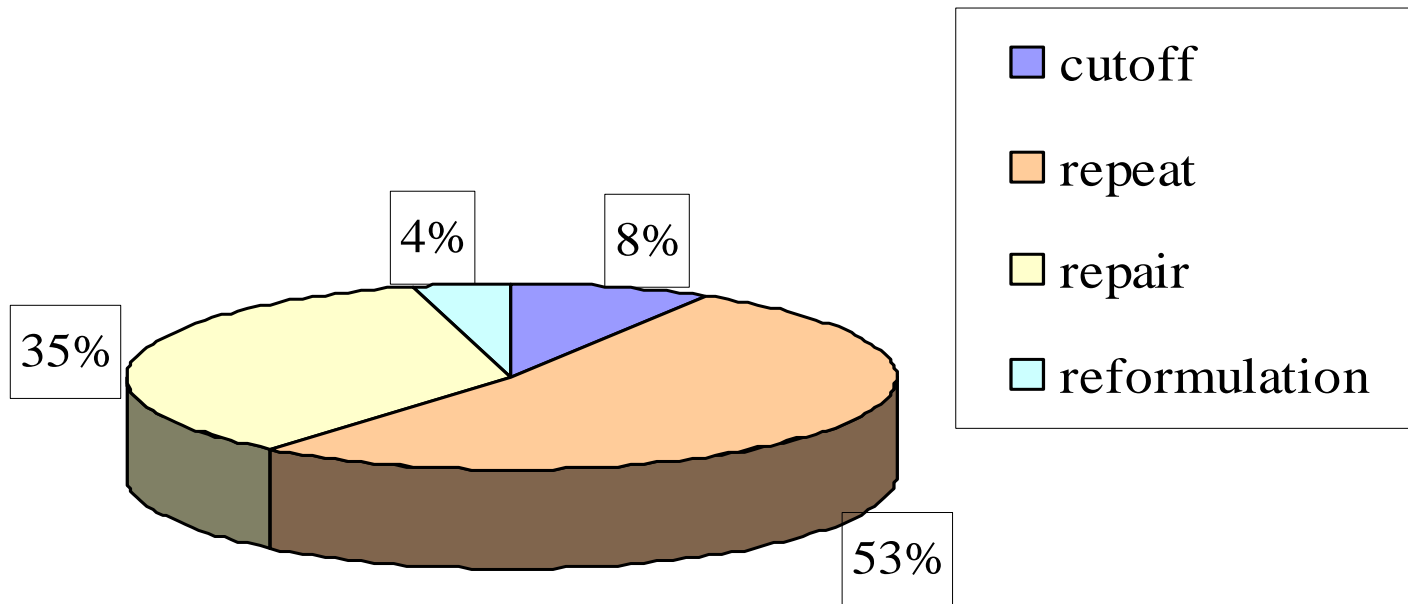


Figure 1. The breakdown of learner dysfluency (n=1596)

# Research Question (2):

- How many dysfluency items did learners produce in one interview?

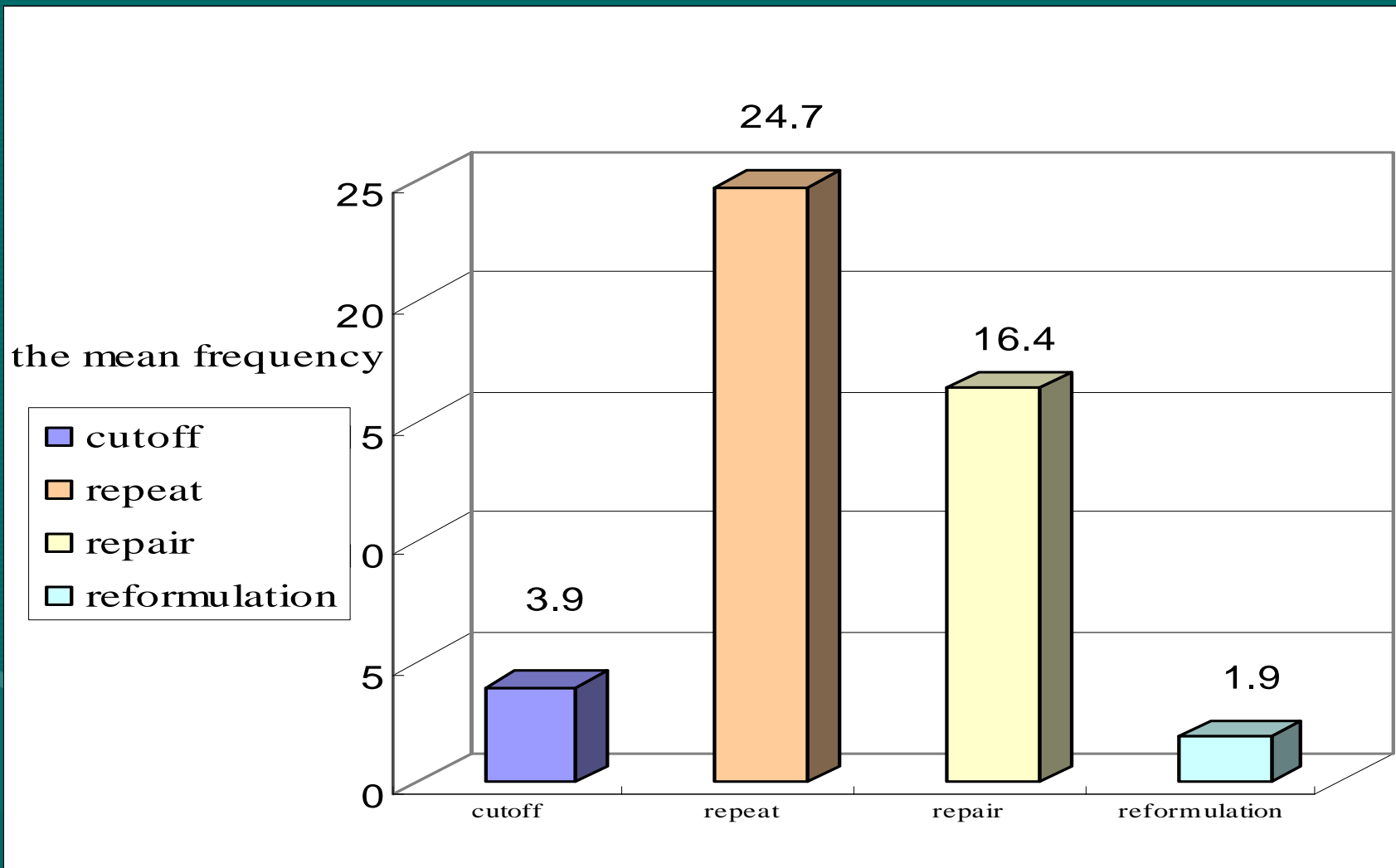


Figure 2. The mean frequency per learner

# Research Question (3):

- Is the frequency of these learner dysfluency items related to the level of the learner?
- Subject                      N=30
  - Level 4                      (n=13)
  - Level 5                      (n=3)
  - Level 6                      (n=8)
  - Level 7                      (n=4)
  - Level 8                      (n=1)
  - Level 9                      (n=1)

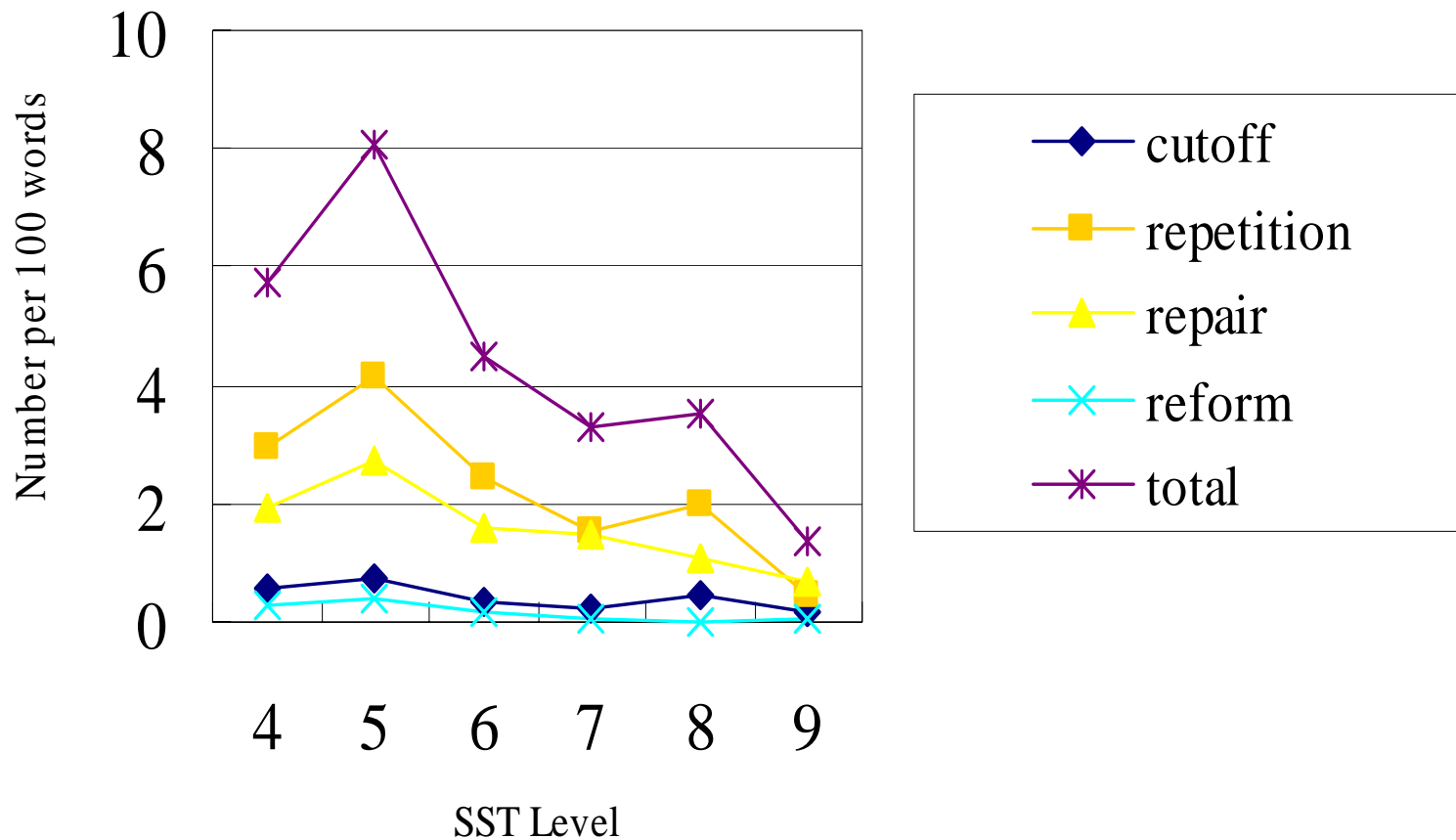


Figure 3. The average number per 100 words at each level

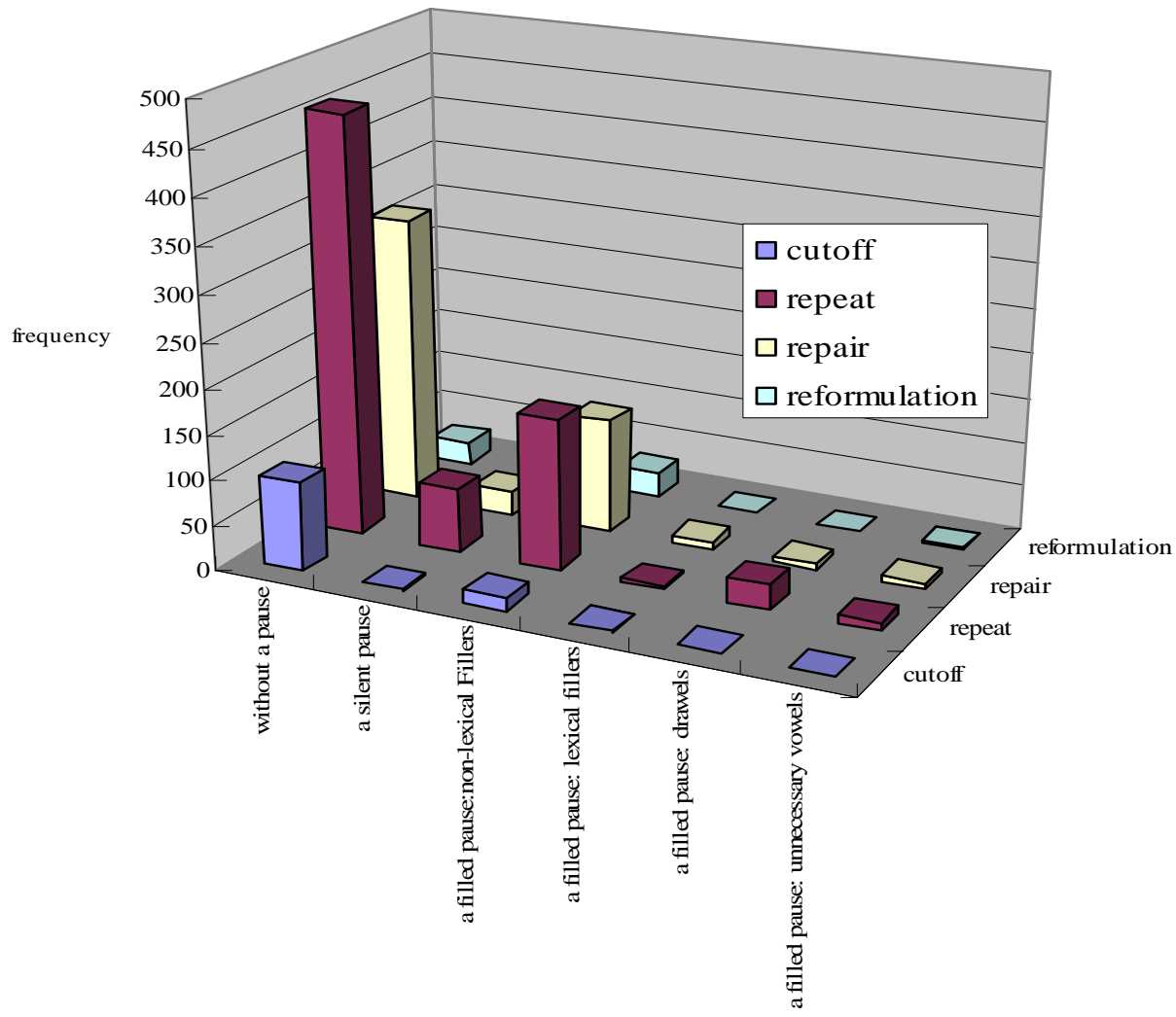
# Research Question (4):

- What is the relationship between the learner dysfluency and the Editing Phase, i.e., without a pause, silent pause, and filled pause?



Table 1. Dysfluency X Editing Phase (n=1596)

		Cutoff	Repeat	Repair	Reformulation
Without a Pause		99	460	318	25
A Silent Pause		2	71	26	2
A Filled Pause	Non-lexical Fillers	15	168	128	28
	Lexical Fillers	1	4	9	0
	Drawls	1	28	6	0
	Unnecessary Vowels	0	9	6	2
<b>Total</b>		118	740	493	57



# Research Question (5):

- What kind of forms occurred most frequently in terms of dysfluency items, i.e., cutoff, repeat, repair, and reformulation?
- What kind of syntactic patterns for the repeat were extracted from the data?
  - Learner chunks

# Frequently used words for 'cutoff'

i (5) is, it

basically Shizuoka people i is a same as Tokyo  
Tokyo's people.

wha (5) what

so she asked a <./> clerk wha what kind of tie she should  
buy.

An (4) and

Yeah, an and where di, di where do you live now?

# Frequently used words for 'repeat'

I (152)

Er, when I , I often studied hard, I often, er,  
forgot eating, two or three  
and (20)

Because I <./> umm, <./> I like eating and, er,  
<./> and, er, <./> I like also cooking, but  
<./>to

she (20)

<./> so she mm she use mm use mm her  
computer now probably, mm

And (18) Sentence Initial And

And, <./> and, Chinese, Japanese, French, and  
Italian, and, <./> and so on.

he (14)

And, <./> mm, he, he drank beer and his uncle  
drank, <./> I think wine, mm,

# Frequently used words for 'repair'

the (7)

after it, they enjoyed the their time, um they  
<./> left the zoo and

a (7)

so I can play even if I, I was a, some equipment  
on the teeth.

I (7)

We say I today I have a another other two two  
classes an

in (6)

And mm I don't have any computers in at home, so I envy this person.

is (5)

yes, Juria, <./> in Chinese character "Ju" is means pearl and he thought I should <./> be I should have

my (5)

I have I had to been absent from er my one of my class.



she (5)

he told her where is. And she <./> finally she,  
mm, stepped up to third floors. That's all.

I'm (5)

so I'm maybe I'm greedy but I want some more  
I want <./> good

# Some examples of 'reformulation'

I'm a

I'm teaching English, so <nvs>laughter</nvs>

I'm a, <./> er, that's not go, good,

I've a

but nowadays I've a, <F>mm</F>, <./> it's  
little bit troublesome, I think,

but when I went back home and saw it, and  
I the color was not just like what I  
have thought.

OK. So, where is your hometown? <B>Mhn  
aa, my, I come from Shizuoka.

# A brief summary

- Items very familiar to Japanese learners are used triggering items to initiate cut-off, repeat, repair strategies to maintain some flow of conversation
- Those items are copula (is ten times), pronouns ( I (I'm, my), she, he, what, 113 times), conjunctions (and, 42 times), and articles (the, a, 14 times) and preposition (in 6 times).

# Syntactic patterns of repeat: automatically produced chunks

- Subject+verb I'm
- Subject+verb I have
- Subject+verb I like
- Subject+verb I want
- Subject+have to I have to
- Verb+to inf wanted to
- Verb+article bought a
- Conjunct+subject if I
- Conjunct+subject when I

- Preposition+article
- Conjunct+adverb
- Conjunct+verb
- Preposition+article
- noun+preposition
- Interrogative adverb  
+modal+subj
- Prep+poss pronoun
- Adverb+copula be
- Subj+verb+to inf

at the  
and finally  
and asked  
along the  
some of  
how can I  
in my  
also is  
I want to  
watch

# Summary

- **Research Question (1)**
- **Research Question (2)**
- **Research Question (3)**
- **Research Question (4)**
- **Research Question (5)**