CHAPTER FOUR

DATA ANALYSES AND FINDINGS

The aim of this study is to examine the difference in strategies used by proficient learners (PLs) and less proficient learners (LPLs) in understanding videos and the factors which distract or facilitate the subjects' understanding of the videos. The researcher collected the data from eight subjects, four PLs and four LPLs, while watching two kinds of videos: a Japanese animation and a Japanese drama. The procedure of the training session of think aloud protocol and the actual data collection session were described in detail in the previous chapter. The data was recorded, transcribed, which was followed by analyses outlined in Chapter 3. That is, the researcher coded the transcribed data based on the taxonomy developed from Vandergrift's taxonomy to answer the Research Question 1. Based on the transcribed data the elements which distracted or facilitated the learners' understanding of the videos were traced. These elements were divided into several categories to answer Research Question 2 and 3. These results findings are discussed in three sections in this chapter according to the Research Questions.

4.1 Research Question 1 Difference in strategy use

Research Question 1:

What kind of comprehension strategies are used to understand the videos of Japanese language by proficient and less proficient Japanese as a foreign language (JFL) learners?

In this section the researcher analyzed the difference in strategies used between proficient learners (PLs) and less proficient learners (LPLs). Based on the coding explained in Chapter 3 (refer to page 51), the researcher analyzed the think aloud protocols and identified the strategies used by each subject while watching the videos. Table 4.1 shows how the researcher coded the data and counted the number of strategies used by the subjects.

Table 4.1
Example of coding

Sub-scene N2-5	Think aloud protocol	Questions asked by researcher when the video was paused
R1: えっ、おまえって趣味悪いな。 N1: どこがですか。 R2: え、いや、だって変なツータックのズボンはいてるし。 N2: 先輩はツータックのズボンなんかはきません。は一違います。こっちです、こっち。	um ①apparently the man is looking at the wrong people because there were two white shirt people, two person wearing white shirts there and ②said that you have a bad taste for man and ③the girl took the binoculars and ④said you have looked at the wrong guy this is not the guy and she tell the man this is the guy which is the main character this is the guy who are break up with ⑤	Researcher: 途中で笑いましたね、あれはなぜ [Why were you laughing?] LPL: 会話のときは conversation that ⑥talk about, you have a bad taste or something like that, which is ⑦very funny I think

When the sub-scene N2-5 ended and the researcher paused the video, the subject began to verbalize the think aloud protocol as represented in the centre column. The researcher identified the five strategies below. The codes in brackets were based on the coding rule explained in Chapter 3 (Appendix A).

① The subject got this idea from a visual input in which two men wearing similar clothes and the focus was on one of them. The researcher coded this part as *visual nonlinguistic inferencing* (C1d).

② The subject got this idea from the utterance R1. The researcher coded this part as *audio linguistic inferencing* (C1a).

③ The subject got this idea from a visual input in which one character snatched away the other's binoculars. The researcher coded this part as *visual nonlinguistic inferencing* (C1d).

④ The subject got this idea from the utterance N2. The researcher coded this part as *audio linguistic inferencing* (C1a).

⑤ In this think aloud protocol the subject generally described what was happening in this sub-scene. The researcher coded this whole section as *summarization* (C3)

Immediately after the subject finished verbalizing his or her think aloud protocol, and in order to confirm what has taken place, the researcher asked questions based on what he observed about the subject while watching this sub-scene. The subject answered and the exchange is recorded in the right column.

⑥ The subject got this idea from the utterance R1. This strategy is considered the same as in ②. Therefore, the researcher considered this as the same strategy.

⑦ This was the subject's feeling or opinion about the sub-scene. The researcher coded this part as *commenting on video content* (C7).

In this sub-scene, the researcher found six cognitive strategies: i.e., 2 audio linguistic inferencing, 2 visual nonlinguistic inferencing, 1 summarization and 1 comment on video contents.

Table 4.2 indicates the number of strategies used by each subject while watching the videos.

Table 4.2
Types and frequency of strategies used by the subjects

		LPL				PL			
		1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Metacognitive strategies									
M1	Monitoring	7	25	18	5	11	18	4	20
M2	Identifying problems	2	14	5		6	10	10	20
Cognitive strategies									
Inferencing									
C1a	Audio linguistic inferencing	33	52	80	30	42	69	25	39
C1b	Audio nonlinguistic inferencing		3	3			2		5
C1c	Visual linguistic inferencing		3	2		1	3		
C1d	Visual nonlinguistic inferencing	30	19	37	30	12	35	15	23
C1e	Between parts inferencing		1	2	1	1	3	5	5
Elaboration									
C2a	Personal elaboration	11	3	9	7	3	8	8	12
C2b	World elaboration	4	1	2	4	2	2	7	2
C2c	Questioning elaboration	6	1					17	7
C2d	Creative elaboration		1		13		1	7	6
C3	Summarization	13	23	42	16	28	28	4	14
C4	Translation		1				2		1
C5	Transfer		1				1		
C6	Repetition		15		1	2			
C7	Commenting on video content	9	1	2	3	3	12	7	22
total		115	164	202	110	111	194	109	176

This is the original table which the researcher used to answer the following questions, i.e., difference in strategies used between PLs and LPLs in this study, and comparison among previous studies and the present study.

4.1.1 Differences in strategies used between proficient learners and less proficient learners

In this section, the researcher compares the difference in strategies used between PLs and LPLs. The researcher originally coded strategies used by the subjects during video watching into 16 categories as shown in Table 4.2. But some of these strategies were rarely used. Therefore, the researcher re-categorized the above items into the nine groups below to better represent the general tendency of the subjects' strategy use.

1) Metacognitive strategy (M1, M2): Talking about own behavior while watching the video
2) Audio inferencing (C1a, C1b): Using audio input to understand the video
3) Visual inferencing (C1c, C1d): Using visual input to understand the video
4) Prior knowledge elaboration (C2a, C2b): Using prior knowledge to understand the video
5) Logical elaboration (C2c, C2d): Using logical guessing to understand the video
6) Summarization (C3): Reconstructing and reporting the information presented in the video
7) Repetition (C6): Repeating words or phrases
8) Commenting on video content (C7): Expressing one's opinion and emotion
9) Others (C1e:Between parts inferencing, C4: Translation, C5: Transfer)

The researcher re-categorized the strategies listed in Table 4.2 and re-assigned the frequencies in the new categories. Table 4.3 indicates the frequencies in these new categories.

Table 4.3
Strategies used and their frequency of use by the subjects

	LPL				PL			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
1) Metacognitive strategies	9	39	23	5	17	28	14	40
2) Audio inferencing	33	55	83	30	42	71	25	44
3) Visual inferencing	30	22	39	30	13	38	15	23
4) Prior knowledge elaboration	15	4	11	11	5	10	15	14
5) Logical elaboration	6	2	0	13	0	1	24	13
6) Summarization	13	23	42	16	28	28	4	14
7) Repetition	0	15	0	1	2	0	0	0
8) Commenting on video content	9	1	2	3	3	12	7	22
9) Others	0	3	2	1	1	6	5	6
Total	115	164	202	110	111	194	109	176

To get the number of strategies used in each group, i.e., LPLs and PLs, the researcher added up the four numbers representing the four subjects of each group in each category. To get the percentage of strategy use, the researcher divided the number of each strategy by the total number of strategy use. For example, to get the frequency of Metacognitive strategies used by LPLs, the researcher added up the frequencies of Metacognitive strategies used by LPL1, LPL2, LPL3 and LPL4 as shown in Table 4.3. The researcher got the number of 76 as shown in Table 4.4. Then to get the total frequency of all strategies used by LPLs, the researcher added up the total frequencies of all strategies used by four LPLs as shown in Table 4.3. The researcher got the number of 591 as shown in Table 4.4. Lastly, to get the percentage of Metacognitive strategies used by LPLs, the number of Metacognitive strategies used by LPLs (76) was divided by that of all strategies used by LPLs (591), and the result was multiplied by 100. The researcher got the percentage of Metacognitive strategies used by LPLs, which was 12.9% as shown in Table 4.4. For each strategy used in each group, the researcher conducted the same calculation and got the frequency and percentage of each strategy used by each group.

Table 4.4
Frequency and percentage of strategies used by proficient learners and less proficient learners

	LPL		PL	
1) Metacognitive	76	(12.9%)	99	(16.8%)
2) Audio inferencing	201	(34.0%)	182	(30.8%)
3) Visual inferencing	121	(20.5%)	89	(15.1%)
4) Prior knowledge elaboration	41	(6.9%)	44	(7.5%)
5) Logical elaboration	21	(3.6%)	38	(6.4%)
6) Summarization	94	(15.9%)	74	(12.5%)
7) Repetition	16	(2.7%)	2	(0.3%)
8) Commenting on video content	15	(2.5%)	44	(7.5%)
9) Other	6	(1.0%)	18	(3.1%)
Total	591	(100.0%)	590	(100.0%)

The four most frequently used strategies by LPLs and PLs are as follows (in decreasing order):

	LPL	PL
1	Audio inferencing	Audio inferencing
2	Visual inferencing	Metacognitive
3	Summarization	Visual inferencing
4	Metacognitive	Summarization

These strategies are put in the order based upon frequency of use, as observed by the researcher.

The difference in the order of strategies may reflect the difference in the thinking processes between LPLs and PLs. Although the task was watching and understanding videos, LPLs seemed to rely on the linguistic information in audio input to help them understand the content of the videos correctly (audio linguistic inferencing). However, they faced problems in constructing meaning from the audio linguistic information. To compensate for this shortcoming, they used a lot of visual input (visual nonlinguistic inferencing) and reconstructed what they had understood while watching the video (summarization). For LPLs, understanding the content was a more important task than reflecting their own understanding or identifying problematic parts in

understanding the videos (metacognitive strategies).

PLs also tried to understand the videos correctly from the linguistic information found in audio input (audio linguistic inferencing). With better listening skills, PLs could understand content of the videos better than LPLs. Therefore, PLs tried to reflect their understanding and identify the problems in understanding (metacognitive strategies). They then used the information in visual input as an aid in comprehending (visual nonlinguistic inferencing) or reconstructing what they had understood while watching the videos (summarization).

Both LPLs and PLs used most of the strategies in similar frequency and percentage. However, PLs used more Metacognitive strategies than LPLs. It is considered that PLs check their understanding more than LPLs, while LPLs rely heavily on visual input to enhance their comprehension.

In table 4.4, inferencing is divided into two strategies: audio inferencing and visual inferencing. LPLs used both audio inferencing and visual inferencing more than PLs. It is evident that LPLs relied mostly on the audio input for information and turned to visual input to improve understanding. Audio inferencing strategy was also the most frequently used strategy by PLs. PLs did not have to turn to visual input as often as LPLs in recovering what they could not understand while watching the videos. They could reflect on their understanding of the videos (metacognitive strategies) or verbalize their opinions or feelings about the contents of the videos (commenting on the video content).

Elaboration is also divided into two strategies: prior knowledge elaboration and logical elaboration. There is not much difference in percentage of the use of prior knowledge elaboration by LPLs and PLs. However, logical elaboration is used more frequently by PLs. It is evident that PLs were more skilful at not only utilizing their previous knowledge (prior knowledge elaboration), but also at thinking about the

relationships among contents in different scenes or even generating questions (logical elaboration).

Commenting on the video content was exhibited more by PLs than LPLs. This demonstrated the PLs' ability to relate their comprehension to what they had had in mind while watching the videos. LPLs are considered to have less capacity to enjoy the videos and speak out their opinions or feelings about the content of the videos. They needed extra efforts to construct meaning and understand the content while watching the videos. This was indicated by the frequent use of audio inferencing strategy, visual inferencing strategy and summarization by the LPLs.

Vandergrift (1997) examined the ranking of strategies used by learners of French. His study included four types of metacognitive strategies, i.e., 1) planning, 2) comprehension monitoring, 3) self-evaluation and 4) problem identification, and eight types of cognitive strategies, i.e., 1) repetition, 2) grouping, 3) deduction/induction, 4) elaboration, 5) summarization, 6) transfer, 7) translation and 8) inferencing. His study showed the top three strategies used by novice learners. The most frequently used strategy was elaboration; summarization was ranked as the second and inferencing was ranked as the third. The study also revealed the top three strategies used by intermediate learners. For this group of learners, the most frequently used strategy was summarization, which was followed by elaboration and inferencing. So the top three strategies used by novice learners and intermediate learners were the same. The difference between novice and intermediate learners only appeared in the forth strategy used. For this, novice learners used translation, while intermediate learners used comprehension monitoring, a metacognitive strategy. Vandergrift stated that novice learners reported more surface-processing strategies as opposed to more deep-processing ones by intermediate learners. He considered this as "a shift in depth of processing which may be an important distinction between novice and intermediate

learners". In his study, the four metacognitive strategies were calculated separately. If the four metacognitive strategies in the Vandergrift study were combined into one group as in the present study, then the Metacognitive strategy would be ranked as the sixth in the strategies used by novice learners and the second in the strategies used by intermediate learners. Both the Vandergrift study and the present study indicate that proficient learners have the capacity to be aware of and reflect on their understanding and thinking process more than less proficient learners.

4.1.2 Differences in strategies used by learners between previous studies and the present study

The researcher chose two studies, i.e., Vandergrift (1997) and Seo (2002) for comparison purposes. Vandergrift studied the strategy use of high school students of French while doing listening comprehension tasks. Seo studied the strategy use of adult learners of Japanese while watching a Japanese TV drama. The present study is about the strategies used by adult learners while watching a Japanese animation and a TV drama. All the three studies mentioned collected data via think aloud protocols. The difference between Vandergrift's study and the other two studies is that the former studied listening and the latter two studied video-watching. The difference between the Seo's study and this study is that the former only studied TV drama viewing by learners whose proficiency level is JLPT level 3 and the present study studied animation viewing and TV drama watching by learners whose proficiency level is JLPT levels 1 and 2.

To compare the results of this study with the previous studies, the researcher re-categorized the above items into the five groups below. These five categories are the common categories which are observed in all three studies (Vandergrift, Seo and this study). The Vandergrift study was on listening comprehension tasks, so the inferencing strategies made no distinction between audio inferencing and visual inferencing.

Metacognitive strategies are divided into four groups in Vandergrift's study, into two groups in this study, and only one in Seo's study. Seo included categories such as identifying keyword and explaining visual elements, which are not included in Vandergrift's study and this study. The codes in brackets refer to strategies used by subjects as indicated in Table 4.2, page 64.

1) Metacognitive strategy (M1, M2)

2) Inferencing (C1a-C1e)

3) Elaboration (C2a-C2d)

4) Summarization (C3)

5) Others (C4-C7)

The researcher re-categorized the strategies in Table 4.2. The result of this re-categorizing is shown in Table 4.5.

Table 4.5
Frequency of strategies used by the subjects in this study

	LPL				**PL**			
	1	2	3	4	1	2	3	4
Metacognitive	9	39	23	5	17	28	14	40
Inferencing	63	78	124	61	56	112	45	72
Elaboration	21	6	11	24	5	11	39	27
Summarization	13	23	42	16	28	28	4	14
Other	9	18	2	4	5	15	7	23
total	115	164	202	110	111	194	109	176

To get the number representation for the strategies used in two groups, i.e., LPLs and PLs, the researcher added up the four numbers for each group in each category. In table 4.6, the numbers show the frequency of strategies used by the subjects in each group and the numbers in brackets show the percentage.

Table 4.6
Frequency and percentage of 5 strategies used by proficient learners and less proficient learners in this study

	LPL		PL	
Metacognitive	76	(12.9%)	99	(16.8%)
Inferencing	326	(55.2%)	285	(48.3%)
Elaboration	62	(10.5%)	82	(13.9%)
Summarization	94	(15.9%)	74	(12.5%)
Other	33	(5.6%)	50	(8.5%)
total	591	(100.0%)	590	(100.0%)

Table 4.7 shows the comparison. Vandergrift's and Seo's studies used different terms to refer to proficient and less proficient learner groups in their studies.

Table 4.7
Comparison with previous studies

	Vandergrift (1997)		Seo (2002)		The present study	
	LPL	PL	LPL	PL	LPL	PL
Metacognitive	8.62%	19.05%	15.9%	11.0%	12.9%	16.8%
Inferencing	15.50%	15.84%	30.3%	19.6%	55.2%	48.3%
Elaboration	20.46%	21.71%	1.5%	13.5%	10.5%	13.9%
Summarization	20.38%	29.87%	7.6%	9.2%	15.9%	12.5%
Others	35.04%	13.53%	44.7%	43.3%	5.6%	8.5%
total	100.00%	100.00%	100.0%	100.0%	100.0%	100.0%

Both Seo's (2002) and the present study examined the strategies used by learners while watching videos. These studies on video-watching comprehension indicate that their subjects used more inferencing and less elaboration and summarization than Vandergrift's study (1997), which examined listening comprehension tasks. In listening comprehension, audio input is the only source of information. Learners have to use their prior knowledge or background knowledge and to guess the content (elaboration) when they do not understand the audio input. However, in video watching, learners can use both the audio and visual inputs to understand the content. Even though they do not understand the audio input of videos, learners can still rely on the visual input to assist in their understanding. This reliance is assumed to increase the frequency of the use of inferencing in such studies.

Next the researcher examined the differences between Seo's study and the present study. Seo's subjects are Japanese language learners whose level of proficiency is at the Japanese language proficiency test (JLPT) level 3, while the subjects of this study are learners who have proficiency levels at JLPT level 1 and 2. Based on JLPT, the subjects in this study are therefore considered to be more proficient learners. Therefore, in the following sections, the five categories in Table 4.7 are described in detail.

4.1.2.1 Metacognitive strategies

The LPLs in Seo's study used more metacognitive strategies than the PLs, while in the present study PLs used more metacognitive strategies than LPLs. Vandergrift's study showed the same results as the present study, that PLs used more metacognitive strategies than LPLs. Seo's result was therefore in contradiction with the other two studies. Seo's study made comparisons among three groups: native speakers of Japanese language, PLs and LPLs. As for metacognitive strategy type, the most frequent users of this strategy type were LPLs. followed by PLs. The native speakers relied the least on metacognitive strategies among the three groups. Seo found that as learners developed their language proficiency, they tended to rely less on metacognitive strategies. However, Seo failed to explain the reason why native speakers used the least the number of metacognitive strategies.

On the other hand, citing Shiffrin and Schneider (1977), Vandergrift described the reason why PLs used more metacognitive strategies than LPLs. He stated "prolonged language exposure allows intermediate listeners to process larger chunks of information and to allocate more attentional resources to monitoring" (Shiffrin and Schneider, 1977, as cited in Vandergrift, 1997, p.401). The results of this study also seem to be explained by the idea of Shiffrin and Schneider. Higher listening proficiency

allowed PLs to allocate their attentional resources to monitoring (metacognitive strategy) and relating incoming input with previous knowledge (elaboration).

4.1.2.2 Inferencing

The subjects in this study used more inferencing than the subjects in Seo's study. But in both studies, LPLs used more inferencing than PLs. In this study the subjects used a lot of audio inferencing strategies, which made this strategy type the most frequent strategy used by both PLs and LPLs. It is clear that the higher proficiency of the subjects in this study made it possible for them to hear the conversation and to construct meaning from the videos. In this study the frequent use of inferencing strategies by LPLs compared to PLs is explained by LPLs' lower proficiency in listening comprehension and the reliance on visual inferencing strategy to compensate for the lack of language proficiency.

4.1.2.3 Elaboration

The PLs in Seo's study used much more Elaboration than the LPLs, while in this study there is no difference in the use of elaboration between PLs and LPLs. The subjects of this study are more proficient (JLPT level 1 and 2), and even LPLs could elaborate by relating what they understood while watching the videos to their prior knowledge.

4.1.2.4 Summarization

In Seo's study the PLs used slightly more summarization compared to the LPLs, while in this study LPLs used more summarization than PLs. It was evident that in this study, PLs' higher proficiency made it unnecessary for them to allocate their attentional resources in understanding the video content by constructing meaning from various information in the video (inferencing) and reconstructing the content of the video (summarization). Their higher proficiency allowed them to allocate their attentional resources in reflecting their thinking process (metacognitive strategy), in relating their understanding to their prior knowledge (elaboration) and in making comment beyond the content of the videos (commenting on the video content in others).

4.1.2.5 Others

In this study, the category of 'Others' contains translation, transfer, repetition and commenting on video content. In Vandergrift's study, they are repetition, grouping, deduction/induction, transfer and translation. Meanwhile, in Seo's study there are nine strategies, which include translation, identifying keyword and response or evaluation on input. In Seo's study the category of 'Others' dominate a large portion of her subjects' strategy use. The table below shows the strategies such as clarifying keyword, translation and response or evaluation on input.

Table 4.8
Other strategies used in Seo's study and the present study

	Seo (2002)		The present study	
	LPL	**PL**	**LPL**	**PL**
Clarifying keyword	15.9%	9.8%	N/A	N/A
Translation	10.6%	15.3%	0.2%	0.5%
Response or evaluation on input (*Comment on video content)	10.6%	8.6%	2.5%	7.5%

* Terms used for the strategy in the present study

The subjects in this study used much less translation than the subjects in Seo's study. It could be concluded that the subjects in this study were more proficient learners (JLPT level 1 and 2) and their range of vocabulary was larger and their ability to decode meaning of words became more automatic than the subjects of Seo's study.

4.1.3 Difference in frequency of strategy use among video scenes

Table 4.9 shows the percentage of strategies used by PLs and LPLs in each scene. The researcher used four scenes in total: two scenes from Doraemon, and two scenes from Nodame Cantabile. The length of each scene is shown below.

Doraemon scene 1 (D1)	3:45
Doraemon scene 2 (D2)	4:40
Nodame Cantabile scene 1 (N1)	2:30
Nodame Cantabile scene 2 (N2)	5:25

The duration of each scene does influence the frequency of strategy use by subjects while watching the scenes. Therefore, the percentage, not the frequency of strategy use, would reflect more accurately the tendency of strategies used by the subjects.

Table 4.9
Difference of strategies used by learners among scenes of the videos

Less proficient learners (LPLs)

	Doraemon 1 (D1)	Doraemon 2 (D2)	Nodame Cantabile 1 (N1)	Nodame Cantabile 2 (N2)
1) Metacognitive	7.5%	10.0%	16.0%	17.8%
2) Audio inferencing	32.5%	40.0%	38.7%	28.0%
3) Visual inferencing	20.0%	19.3%	24.0%	22.9%
4) Prior knowledge	14.4%	4.3%	1.3%	5.1%
5) Logical	4.4%	3.6%	1.3%	3.7%
6) Summarization	16.9%	18.6%	16.0%	12.1%
7) Repetition	1.9%	2.1%	1.3%	4.2%
8) Comment	0.6%	2.1%	1.3%	4.7%
9) Other	1.9%	0.0%	0.0%	1.4%
	100.0%	100.0%	100.0%	100.0%

Proficient learners (PLs)

	Doraemon 1 (D1)	Doraemon 2 (D2)	Nodame Cantabile 1 (N1)	Nodame Cantabile 2 (N2)
1) Metacognitive	8.9%	13.2%	12.5%	24.9%
2) Audio inferencing	30.9%	32.9%	40.0%	27.0%
3) Visual inferencing	14.6%	18.4%	8.8%	15.6%
4) Prior knowledge	18.7%	3.9%	2.5%	5.5%
5) Logical	7.3%	6.6%	7.5%	5.5%
6) Summarization	8.1%	11.8%	17.5%	12.7%
7) Repetition	0.0%	0.0%	0.0%	0.4%
8) Comment	11.4%	7.9%	5.0%	6.3%
9) Other	0.0%	5.3%	6.3%	2.1%
	100.0%	100.0%	100.0%	100.0%

The researcher took into consideration the difficulty of vocabulary and amount of visual information when choosing the above four scenes. The difficulty level of vocabulary in D1 and N1 is rated as ‘normal’ by the vocabulary checker in the website ‘Reading Tutor Homepage’, and that of D2 and N2 are rated as ‘a little difficult’. As for the visual information, D1 and N1 featured scenes such as in a friend’s house, in front of a friend’s house and in a bar. The subjects received visual information from characters’ facial expressions or body movements, but not much information about the storyline. However, in D2 and N2 characters move from one place to another, and the subjects could understand some of the storyline merely by relying on the visuals.

Heavy use of prior knowledge in D1 can be explained by the fact that this scene is a characteristic of this comic; Nobita has some problems, such as being teased by his friends and making promises which he cannot keep, and then he asks Doraemon for help. This is the typical premise of this comic. All the subjects of the present study knew this comic and they used their background knowledge of this comic to understand the story line, although each scene provides visual information consisting mainly of the place of interaction.

In N1 two characters are arguing in a bar. This scene does not provide much visual information except for facial expressions and the location. The pace of conversation is fast because the characters in this scene are arguing. Table 4.9 shows that PLs relied on audio information, while LPLs relied not only on audio but also visual information, even though the scene did not provide much visual information. It indicated that LPLs could not completely catch the conversation in this scene and tried to understand the content through visual information such as facial expressions.

From the analyses of Research Question 1, the researcher found that the top four frequent strategies used by LPLs and PLs are the same (audio inferencing, visual inferencing, summarization, metacognitive strategy). Metacognitive strategies became the second most frequent strategies used by PLs, while it is fourth for LPLs. PLs' better listening ability allowed them to use more metacognitive strategies than LPLs and helped PLs to review their understanding while watching videos. LPLs focused on understanding the content of the videos using more cognitive strategies (audio inferencing, visual inferencing, summarization). Vandergrift's study showed the same results. PLs used more metacognitive strategies than LPLs. He explained the reason as PLs could allocate more attentional resources to monitoring. On the other hand, Seo's study showed that LPLs used more metacognitive strategies than PLs. She explained the pattern of strategy use became similar to the pattern of native speaker who used the least

metacognitive strategies in the study comparing PLs, LPLs and native speakers. However, Seo failed to explain the reason why native speakers use the least number of metacognitive strategies.

In this section, the researcher analyzed the difference in strategy use between LPLs and PLs to answer the Research Question 1. In the next section, the researcher will examine the factors which distract the subjects' understanding of the videos.

4.2 Research Question 2 Difficulties in understanding videos

Research Question 2:

What kind of difficulties do proficient and less proficient Japanese Foreign Language (JFL) learners encounter in understanding these videos?

As described in the original data analyses plan in Chapter 3 (page 56), the data of the think aloud protocols and interviews were analyzed to answer this research question. The think aloud protocols and interviews were analyzed in terms of distracting factors perceived by both PLs and LPLs, as well as by each group exclusively while watching videos.

Think aloud protocol is helpful in answering Research Question 2, because the subjects elaborated their thinking processes scene by scene. In the interviews the researcher asked questions about the difficulties the subjects demonstrated in their think aloud protocols, and obtained more detailed explanation about their thinking processes.

To analyze the factors that distract the subjects' understanding, the researcher picked out two kinds of utterances from the data collected in think aloud protocols and interviews. One type were utterances in which the subjects reported their difficulties in understanding the videos. These utterances included phrases such as "...I don't know" "... I don't hear" and these corresponded to the utterances of metacognitive strategies.

The other type were utterances that contained subjects' misunderstanding or inaccurate prediction about the video content. The utterances were further analyzed in terms of the types of distracting factors. The distracting factors found in this study were categorized into six groups:

1) Unknown word or phrase

2) Grammatical difficulty

3) Long utterance

4) Unclear pronunciation

5) Fast speech rate

6) Distracting visual

These six factors were re-categorized into three groups. The first two elements - unknown word or phrase and grammatical difficulty - are related to the subjects' linguistic knowledge. The next three elements - long utterance, unclear pronunciation and fast speech rate - are related to the audio factor in the characters' conversation in the videos. The last element, distracting visual, is related to visual found in the videos.

1) Linguistic knowledge → Unknown word or phrase, grammatical difficulty

2) Audio factor → Long utterance, unclear pronunciation, fast speech rate

3) Visual factor → Distracting visual

4.2.1 Linguistic knowledge

The factor included in this category is related to the subjects' lack of linguistic knowledge such as vocabulary or grammar, and/or the subjects' inability to use the knowledge in authentic tasks.

4.2.1.1 Unknown word or phrase

In authentic material such as dramas and animations there are a lot of words and phrases which learners are not familiar with and have never heard of. Unknown word or phrase is the linguistic factor reported most frequently by LPLs and PLs. However, there are a few sub-scenes in which different subjects referred to similar words or phrases. Sub-scene D2-4 is one of those examples.

Sub-scene D2-4

In this scene, Doraemon worries that the dinosaur is always kept in Nobita's room. Nobita proposed that he should take the dinosaur for a walk.

LPL2: "PS" I cannot understand "PS PS"

PL2: 恐竜の名前が出ているんですけれども、でもちょっと聞き取れないで、ピーキューというような感じ
[The name of the dinosaur is in the conversation, but I cannot hear it clearly, it sounds like "PQ"]

This example shows the differences between LPLs and PLs in understanding the utterances that contain unknown words or phrases. Nobita said the dinosaur's name "Pisuke" a few times in this sub-scene. LPL2 did not understand what this meant, while PL2 recognized this was the name of the dinosaur, even though both of them did not catch the correct pronunciation.

There are few occasions whereby LPLs and PLs encountered similar difficulty with similar words. Therefore the discussion will be presented as follows. The researcher will describe the problem words faced by LPLs first, followed by those faced by PLs in order to show the differences between LPLs and PLs. First, the examples of LPLs are analyzed.

Sub-scene D2-10

In this sub-scene Nobita's mother suspects that he is keeping some pets secretly and gives him a warning. The two subjects only mentioned that they couldn't catch the mother's words of warning.

LPL2: just now the mother got one word I cannot understand *titosimasenyo*

LPL3: I didn't understand is um after mother if the mother found up something what will happen after that I didn't hear it clearly

In their think aloud protocols, LPL2 and LPL3 revealed their difficulties in recognizing certain Japanese words. But LPL1 and LPL4 hardly do this. They appear to be the type of listeners who are not particular about unknown words.

PLs also made similar remarks, as those made by LPL2 and LPL3 when PLs had problems in recognizing words or phrases. However, they indicated that they tried to understand the words by connecting them to other words in the utterances.

Sub-scene N1-5 PL2: タガ工会社のあれ何とか、あれ言葉聞き取れなかった
[*Tagae* company's what, I didn't understand the word.]

Sub-scene N2-2 PL2: 男の人の先輩の名前を言いましたけど
[(She) said the name of her senior, a man.]

Sub-scene D1-6 PL1: 何のスパゲティーを食べるということ。よく聞きませんでした。
[What kind of spaghetti do they eat? I didn't hear it well.]

Sub-scene N2-5 PL1: なんというズボンはいているんですか。
[What kind of trousers does he wear?]

These examples indicated that PLs tried to understand the words in the context in which they are used. PLs had some ideas about the context of the unknown words. They could not reproduce the words precisely but understood the meaning or the function in the utterances. LPLs' utterances did not imply this knowledge.

In the following examples PLs showed that their knowledge of words or phrases that caused their misunderstanding.

Sub-scene N1-1 PL1: 首になったということですね、真一が…大学の話といって、先生のこと言っているけど、どうして首、首は Fire ですよね。仕事やめるっていう、でも大学にもそういうことがあるのかなと思ったんです。
[Got fired, Shinichi. They talk about university, the teacher. but why did they use the word *kubi*? *kubi* means fired, doesn't it? It means quitting job. But I am not sure in university the same thing happens (does the word kubi mean being fired and also mean quitting study in university)]

Sub-scene D1-6 PL4: もしなんかうそとかつくんやったら、スパゲッティーとか作る
If I tell a lie, I'll make spaghetti.

Sub-scene N2-4 PL4: ぶつけてやるとあの人に I think he wants to punch this guy

In sub-scene N1-1, PL1 was confused about the usage of the word *kubi* which originally means "to get fired". She thought this word was only used at business administrative levels and not used in other places such as a university or classroom. PL4 misheard the words with other words which had similar pronunciation. In sub-scene D1-6, PL4 misheard *kutteyaru* (I'll eat) with *tukutteyaru* (I'll make). In sub-scene N2-4, PL4 misheard *kuttsukete* (to make up with) with *butte* (to hit). PL4 also indicated in his verbal summary that he misunderstood these words and could not use other relevant information to reach an understanding.

In the above examples, LPLs tried to reproduce the problematic words or phrases precisely, while PLs' knowledge about vocabulary and higher listening proficiency enabled PLs to understand the meaning and/or the function of the words or phrases in the context and they made more precise inferencing about those words or phrases.

Difficulty with vocabulary varies from subject to subject. In sub-scenes D2-4 and D2-10, two or more subjects encountered difficulties with the same word or phrase, which is a rare case in this study. In sub-scene D2-4, LPL2 and PL2 had difficulty in recognizing the name of the dinosaur and in sub-scene D2-10, LPL2 and LPL3 had

difficulty in recognizing the mother's words of warning. In most cases, each subject encountered problems with different words or phrases.

4.2.1.2 Grammatical difficulty

In this study the researcher found three grammatical factors that distracted the subjects' understanding of the videos: 1) The omission of elements such as subject or object in a sentence, 2) Passive voice and 3) Double negation. Two of these factors, the omission of some elements and passive voice, are examined in this section, because these factors prevented two or more subjects from understanding the content of the videos.

Sub-scene N1-1

In this scene, Chiaki is barred from attending classes by his teacher and Saeko comes to seek confirmation. She asks Chiaki "江藤先生のとこ、首になったって、本当？(Mr. Eto's lesson, (you) got fired. True?)" In this utterance, the phrase which indicates the fired person (the receiver of the action) was deleted and did not appear in the sentence. This omission caused some subjects of this study to consider that Mr. Eto was fired, although he was the person who barred Chiaki from attending his classes.

LPL1: えと先生が首と思いました
[I thought Eto sensei was fired]

LPL2: Is it a Edowa sensei? He's ah already resign

LPL4: 先生が首になった(Sub-scene N1-2)
[The teacher was fired.]

PL2: 江藤先生...やめた
[Eto sensei has quit]

PL3: その一人の先生がやめる
[One teacher quits]

PL4: 話とかあんまりわからないですね、ただ首になった人が気になってる
[I don't understand the story, I'm concerned about the person who was fired.]

This grammatical difficulty has a similar effect on interpretations by both LPLs and PLs. LPL1, LPL2, LPL4, PL2 and PL3 thought that Chiaki's teacher is fired. In actuality, it is Chiaki who is barred from attending classes. In this sub-scene the visual element presents the situation in which two characters are talking and does not include the information about the topic discussed. Therefore, based on visual element of the sub-scene, the subjects could not cross-check their misinterpretation.

Sub-scene D2-4, 5

In these scenes Doraemon explains to Nobita what will happen if they take the dinosaur outside. In the first scene (Sub-scene D2-4) Doraemon warns the dinosaur would be taken away, and in the second (Sub-scene D2-5) Doraemon worries the dinosaur would be displayed in a zoo. Doraemon uses the passive voice in both expressions.

LPL1: ドラえもんはもっとちゃんと考えて..研究者につれて...持っていこうと思って
[Doraemon consider more... take (the dinosaur) to the researcher...bring it]

LPL2: Doraemon will be thinking want to ta taking back maybe thinking take the baby dinosaur go to the zoo

LPL4: the dialogue just now I couldn't understand

PL1: dinosaur の、なんか暮らしにくい世界だとドラえもんが言ったんですよ、出たら、他の人に見られたら、なんか研究とかいろいろに...してしまう
[Doraemon said (it is) a difficult world for dinosaurs to live in, if (the dinosaur) go out and is seen by someone, ah, it will be used for research or something.]

PL2 ドラえもんが心配していることがわかって、取られちゃうから
[I understood what Doraemon worried about, (the dinosaur would be) taken away]

PL3: いろんな人に見せるといろいろ実験物として、あの、その最後のせりふで今の世界はその恐竜にはふさわしくない世界だ
[If (you) show (it) to many people (it will be used) as an object of experiment and the last words was this world didn't suit dinosaurs]

PL4: 結局ドラえもんが言ってるのはやっぱり世界は暮らしにくい
[What Doraemon said is that this world is difficult to live in.]

In these scenes, this grammatical element (the passives) affect LPLs and PLs differently. Due to unfamiliarity of the usage of Japanese passive voice in conversation, LPL1 and LPL2 misunderstood Doraemon's plan- to send the dinosaur back to the time where he came from. They thought Doraemon wanted to take the dinosaur to a science research centre or a zoo. However, PL1 and PL2, who not only showed precise comprehension of Doraemon's intention, were able to fully understand the expression of his fear that the possibility of the dinosaur being caught and sent to a research centre for scientific experiments, as this world was considered by Doraemon to be unfit for the dinosaur to live in.

Both PLs and LPLs showed similar understanding of the sub-scene N1-1, while in sub-scene D2-4, 5 PLs showed better understanding than LPLs. It is evident that PLs' grammatical knowledge and vocabulary knowledge in listening comprehension enabled them to understand the content in sub-scene D2-4, 5.

In the Japanese language, functional elements are put after each word to indicate the grammatical function of words in a sentence. For example, case marker is put after noun and it shows the function of the noun in the sentence such as subject or object. Elements which indicate voice, aspect or/and tense are put after verbs. In the following sentence which means "I studied Japanese language at University of Malaya", the elements which indicate grammatical function such as case and tense are put after content words.

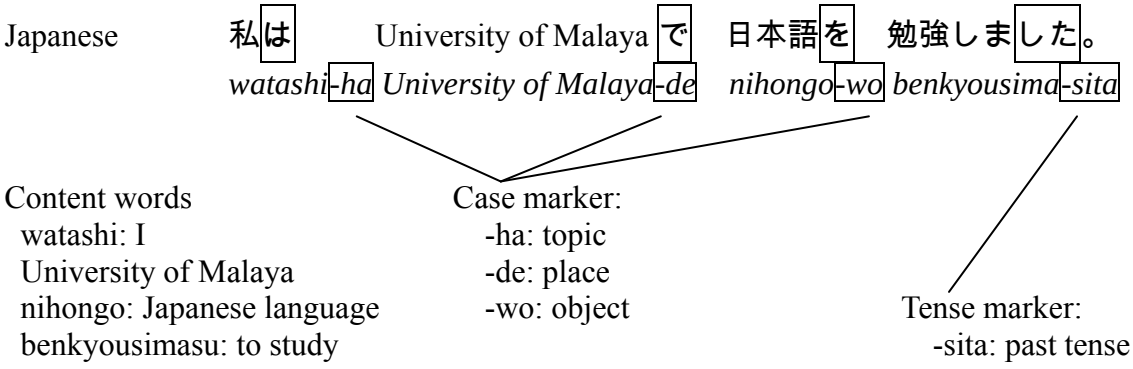

Figure 4.1
Basic sentence structure of Japanese language

Therefore, learners of Japanese language are required to develop skills in constructing meaning from content words with functional elements so that they can apply their grammatical knowledge in situations where no written form of the language or no subtitles are provided to help the subjects' understanding.

4.2.2 Audio factor

The researcher examined the sub-scenes that included the subjects' difficulties caused by audio factors. It consists of long utterance, unclear pronunciation and fast speech rate.

4.2.2.1 Long utterance

Long utterances appeared in the videos used in this study when one character blamed or tried to persuade another character. This caused difficulties only for LPLs' understanding.

Sub-scene N1-4

In this scene Saeko blames Chiaki for not going abroad to study. Chiaki strongly wants to go abroad to study conducting an orchestra. However, he could neither get on an airplane nor a ship due to a past experience. Saeko speaks excitedly for a long time.

LPL1: 飛行機がなんかちょっとこわがってかもしれない
[He may be afraid of airplane.]

LPL2: Long time ago maybe got a happened ah ah the aeroplane accident
I cannot understand ya

LPL3: Main character not to dare to go in the airplane because I think maybe *kyouhu* like mad, but his air crash or something like that

飛行機のシーンだけ、あとはちょっと聞こえませんでした
[(I understand) only the scene of the airplane, I couldn't catch anything other than that.]

LPL4: He is afraid of riding the airplane and he thinks back to his childhood

LPL1, LPL2 and LPL3 said they could not hear her utterance. They understood Saeko and Chiaki were talking about an airplane accident and Chiaki was very afraid of it from the visuals of an airplane accident and Chiaki's facial expression. But they couldn't understand that the experience of the accident is the reason why he cannot go for studies abroad.

PL1: あの小さいときに、なんか事件があって、それで怖くて、船にも乗れないし、飛行機にも乗れないし、だから留学できないです
[When he was a child, he met with some accident, so he is afraid to get on a ship or an airplane and cannot go to study abroad.]

PL2: 女の人がやっぱりそれだったらビエラ先生のところに留学すればよかったのに、なぜかできなかった理由もちゃんとわかっているんですね、というのは、飛行機乗るのが怖がっている
[The woman said he had had better go to study under Mr. Vieira. Of course she knew the reason why he couldn't do it. He was afraid of getting on an airplane.]

PL3: 彼が本当にやりたいことのほうに行ってほしいといういっぱいいっぱいで、それでまあチャレンジをさせるところです
[(She) strongly hopes for him to pursue the study that he really wants, and she challenges him to overcome his fear.]

PL4: 飛行機とか船とか乗るのが怖かったんですよ
[He was afraid of getting on an airplane or a ship.]

女の子とお前はもったいない、もったいないというか何言ってる
[The girl said something, what a waste (of your talent), what a waste.]

PL1 and PL2 understood that Chiaki could not get on an airplane or a ship, so he could not go to study abroad. PL3 and PL4 even managed to comprehend that Saeko tried to persuade Chiaki to go for studies abroad, while LPLs did not.

Sub-scene N2-2

In this scene Ryutaro finds that Nodame is depressed due to a broken heart, and tries to give her some encouragement.

LPL1: 失恋のせいで言葉が話せなかった
[(She) cannot talk because she is broken-hearted]

LPL2: The girl is very sad because just breaking with the boyfriend

LPL3: The man is not very happy about the situation the broken up happened
LPL4: 失恋か
[Is she broken-hearted?]

LPLs only understood that Nodame was depressed due to a broken heart. They did not explain what Ryutaro said after he found this out. However, PLs not only reported the girl's broken heart but also tried to find some other information from Ryutaro's utterances.

PL1: 失恋だそうです。試験がもうすぐだから、練習しないとだめだから、引っ張っていったんですよ
[He said she is broken-hearted. He has an exam soon. He has to practice, so he drags her away.]

PL2: さっき聞き取れなかった言葉は失恋、男の人が言い換えている。仲良くさせるために連れて行く...先輩の名前は、はっきり言っていない。
[The word I couldn't catch before is broken heart, the man rephrase it. (he) took her to hook her back up with (her boyfriend).]

PL3: この二人は恋人ではなくて友達ですね...今のチャンスを捕まって、これから関係ができるんじゃないですか
[They aren't in a boyfriend-girlfriend relationship but just friends... (he) grabs this chance, and hopes they will become lovers]

In this example LPLs and PLs showed different understanding of the content of the video. LPLs reported only their understanding that the girl was depressed due to a broken heart. However, PLs understood the content better than LPLs, as they managed to grasp what is implied. For example, they made further predictions and deductions on what the man was going to do, or what would happen.

It is considered that LPLs faced two kinds of difficulties when a character spoke for a long time without pause. First, LPLs' lower listening proficiency did not allow them to process a large amount of input at one time and they need time to construct meaning. On the other hand, PLs' higher listening proficiency enabled them to overcome this difficulty. Second, the subjects did not have the chance to reflect on the utterances which they missed, as they have to focus on the subsequent utterances or replies by another character. LPL2, LPL4 and PL4 reported in their interviews that

when they could not hear or understand a character's utterance, they would stop thinking about the utterance and would continue listening to the next utterance or reply by another character to guess the missed information. However, in a long utterance, the subjects did not have the opportunity to guess the missed part because the response of the next utterance will only come much later. This does not allow the subjects to guess the missed information.

4.2.2.2 Unclear pronunciation

Unclear pronunciation is reported by both LPLs and PLs as a factor which caused difficulties in understanding the videos. In several sub-scenes the subjects reported the conversation is not clear. The two major reasons which made the pronunciation unclear are because the characters spoke in excitement or in desperation. In the examples below the characters do not speak clearly because they are depressed or very disappointed.

Sub-scene N2-1

In this scene Ryutaro talks to Nodame who is depressed due to a broken heart. Nodame is so depressed that she replies to Ryutaro without moving her lips, which makes her utterance unclear.

LPL1: 彼女の話はちょっと聞きにくい
[Her speech is hard to listen to]

LPL4: 聞こえない、聞こえなかった
[I don't hear, I didn't hear it.]

PL1: 女の子の話し方は聞きにくい
[The way the girl speaks is hard to listen to.]

PL2: しゃべっている言葉はすごくなんかよく聞き取れなかった
[The words (the girl) was saying, I didn't hear them very well]

PL4: 女の子が言っていることがあんまり聞き取れないんですけど、聞き取りにくいんですけど
[I don't hear what the girl is saying, it's hard to hear.]

In this sub-scene, both LPLs and PLs showed similar difficulty. Nodame hardly moved her lips, which made her utterance unclear. Henricksen (1980 as cited in Buck 2001) found that phonological modification, which is change of sound occurred in fast speech or informal speech, lead to difficulties in listening comprehension for second language listeners, even high-level listeners, but native speakers had little difficulties in listening comprehension in such situation. In this sub-scene, Nodame's unclear pronunciation made it almost impossible for both PLs and LPLs to understand her utterance.

Sub-scene N2-7

In this scene Nodame says grimly to Ryutaro that practicing to play music is not important for her anymore because she will die soon. Ryutaro replies excitedly she can not die from a broken heart.

LPL1: なんか頭が混乱中のときは、なんか、言葉がちょっと口からちゃんと出てくれないかなと
[When her mind is confused, words may not come out from her mouth.]

LPL2: I cannot understand but I think the girl is learning a music, don't want maybe she don't want to learn

LPL3: 練習どうでもいいような言葉が出てきた、最後は聞こえませんから
[A phrase like practicing doesn't matter came out, I cannot hear the last part.]

PL1: 練習をしたくない、なんか死にたいと言ってたかな。でも練習、失恋ぐらいはしな、しし、死んでもしょうがないといったかな、
[(She) said she didn't want to practice, and wanted to die. But there isn't much point in dying of broken heart, practicing.]

女の子が話しているのは、わから、わかりにくいですよ。
[What the girl is saying is hard to understand.]

PL2: 女の人はもうやる気がなくて、なぜか練習よりも死んじゃうかっていうような話で、それでもう、男の人はもう死ぬわけないじゃないですかと
[The woman doesn't feel like to doing anything, and said she will die rather than practice. So the man said you cannot die.]

PL4: 練習してもやはり死ぬか、という意味だと思うんですけど、えーだから練習ぐらいで死なないよって男の人が言ってる
[I think it means that she will die even though she practices. So the man said you won't die of practicing.]

In this sub-scene PLs understood more than LPLs. LPLs only understood that the

characters talked about practicing, while PLs' better listening proficiency enabled them to understand that Nodame also talked about death and Ryutaro consoled her. Although Nodame's utterance is not clear, it is still clearer than in sub-scene N2-1. This led to the difference in understanding of the conversation between LPLs and PLs.

4.2.2.3 Fast speech rate

Many studies recognized speech rate as a factor which affects listeners understanding (Richard, 1983; Rubin, 1994; Goh, 1999; Talihun, 2008). In this study fast speech rate was reported by both LPLs and PLs as a factor that affected their understanding of the content of the videos. The characters speak fast in sub-scenes when they are in an argument or a quarrel.

Sub-scene N2-10, 11

In the sub-scene N2-10, Nodame asks the customers in the restaurant to help her to write 100 chain letters. Ryutaro asks Nodame excitedly to remember the reason why she is teased like this. Then in the sub-scene N2-11 Nodame replies very excitedly that she does not expect so. Their fast speech rate made it difficult for the subjects to decipher the words used and therefore understand the conversation.

LPL2: I cannot listen what the girl talking hai totally cannot, and then the maybe the guy is asking is it just you you now the you still remember the letter what they are writing

LPL3: She ask for the other's place like fish market or some other place and man is said that um just wake up from it and get a grip and the scene changed already

ちょっと話が速いだから聞こえない
[I cannot hear it because the speech is fast.]

PL1: すごいわかりにくいです、女の人が言っていること。どうしてこの手紙もらったのか、たぶん、つまみ食いしたとか、
[Very difficult to understand, what the woman was speaking. Why did you get this letter? Maybe eat secretly.]

PL3: 女の人の、私にはちょっとわかりにくかったです。言葉としゃべり方

[The woman, it's a little difficult for me to understand, the words and the way to speak]

PL4: あんまり考えがないんですね、会話があんまり理解できないんですけど
[I have few ideas, I don't understand the conversation well]

The fast rate of speech in these sub-scenes prevented both LPLs and PLs from listening to the words and constructing the meaning. To understand the content of these sub-scenes, the subjects utilized the following elements in the videos. In sub-scene N2-11, some subjects caught certain words (LPL3: fish shop, PL1: eat secretly) and other subjects used information in the previous sub-scene (LPL2 and PL1: letter) to infer the content of the scene.

Buck (2001) reviewed previous studies on speech rate and suggested that learners experience a gradual decline in listening comprehension when exposed to increasing speech rate. When the speed of the speech rate reached a specific point, it was found that listening comprehension decline rapidly instead of gradually from that point onward. This phenomenon differs from learner to learner. Griffiths (1991 as cited in Goh, 1999) suggested that different languages have different normal rates. Further studies are needed to identify the threshold level of speech rate in the Japanese language, which seems different between LPLs and PLs.

4.2.3 Distracting visual

Visuals helped the subjects to understand the content of the videos. However, it sometimes worked against them and became a distracting factor. The following sub-scenes are examples where visual input negatively affected the subjects' understanding of the content of the videos.

Sub-scene N2-3

In this scene Chiaki and Saeko are talking in a cafe. One man is sitting near

them and was mimicking Chiaki's action. The three subjects reported in the interview that they couldn't concentrate on the conversation of Chiaki and Saeko because they were distracted by the movement of the man in the background of the speakers.

LPL1: 誰かこの人とまねしている、そのその人の後ろで
[Someone is mimicking this man, behind the man]

LPL2: Whole whole talking the word I cannot pick up

LPL3: I can't hear well

LPL4: 今会話聞かなかった、ずっと後ろの人を見ていた
[I didn't listen to the conversation, I was watching the man at the back.]

PL1: 同じことをやってたんですよね。だから、あまり会話聞いてないんです。
[He did the same thing, so I didn't listen to the conversation well.]

PL2: 今女の人は不満な気持ちがあるんですね...それが男の人なんか聞かない。
[Now the woman has some feeling of discontent...the man isn't listening to it.]

PL3: 不思議な男がいた。後ろにすわっている、まねする男...会話は...意味はわかんなかったですね。
[There was a strange man. He was sitting at the back. Mimicking...their conversation...I didn't understand the meaning]

PL4: あの後ろ見ると一人がいてなんかまねしてるんですね
[I see at the back and there is one person mimicking.]

男とか言ってることが聞き取れなかった
[I couldn't hear what the man said]

In this sub-scene, visual input hampered the comprehension of both LPLs and PLs. LPL2 and LPL3 reported that they could not understand this scene. LPL1 and LPL4 as well as PL1, PL3 and PL4 reported that they could not concentrate on the conversation because they were distracted by the funny movement of the man sitting behind the two characters. In this sub-scene, the action of the man sitting behind had no relation at all to the conversation between the two characters. The visual input in this sub-scene prevented both LPLs and PLs from concentrating on listening to the conversation.

Sub-scene D2-3

In this scene Doraemon is looking at Nobita and the dinosaur playing with a

ball. Doraemon's face looks unhappy and two subjects come up with the following reasons.

LPL4: I think Doraemon is sad because Nobita keep on playing with his new friend and no playing with him anymore

PL1: ドラえもんが...jealous じゃないかな、なんか、その目を見たら...のび太が帰ってきたらすぐ dinosaur と遊んでいるから
[I think Doraemon feels jealous, from his eyes, because Nobita plays with the dinosaur soon after he comes back.]

In this sub-scene, the visual input caused similar interpretation by both LPL4 and PL1. Doraemon's face actually shows his worry about the place where the baby dinosaur is kept. But the two subjects above deduced from his eyes that Doraemon felt sad because Nobita played only with the dinosaur.

MacWilliam (1986 as cited in Wagner, 2007) argued that video input can distract learners' attention from audio input and may disturb comprehension. Sub-scene N2-3 is the example of this distracting effect of visual input. Both LPLs and PLs gave attention to the character mimicking another character and did not focus on the conversation between characters.

From the analyses of Research Question 2, the researcher found that factors that caused the subjects difficulties in understanding the video were: unknown word or phrase, grammatical difficulty, long utterance, unclear pronunciation, fast speech rate and distracting visual. Some distracting factors caused different interpretations between LPLs and PLs. For example, Unknown words or phrases caused LPLs difficulty in recognizing Japanese words, while PLs may have some ideas about the context of the words. Long utterances prevented LPLs from grasping the main idea of a sub-scene, while PLs would still manage to get more detailed information from the characters' conversation.

In this section, the researcher has analyzed distracting factors in the videos to answer Research Question 2. In the next section, the researcher examines the factors

facilitating the subjects' understanding of the videos to answer Research Question 3.

4.3 Research Question 3 Factors that facilitate understanding videos

Research Question 3:

What are elements of the videos that assist proficient and less proficient JFL learners in comprehending the content of the videos?

In the original data analyses plan described in Chapter 3 (page 56), the researcher planned to examine the data of think aloud protocols, interviews and verbal summaries in order to answer this research question. The data elicited from the think aloud protocols and interviews were analyzed in terms of subjects' use of visual and linguistic clues in the videos. The researcher examined the verbal summaries to trace the pattern between verbal summaries which show learners' correct understanding of the videos and think aloud protocols which reveal learners' difficulty in understanding the video content. Then the data from think aloud protocols and interviews were analyzed again in order to collect more information to justify the existence of such pattern.

However, it was difficult to detect such patterns in verbal summaries. There was no obvious difference between summaries made by PLs and LPLs. Both groups reported the storyline of the video content. And every subject verbalizes correctly what he or she had understood while watching the videos. Therefore, the data of verbal summaries were not used to answer the Research Question 3. Instead, the data obtained from the think aloud protocols and interviews were used as a basis for data analyses in answering Research Question 3.

In this section the researcher examined the factors that facilitate the subjects' understanding of the content of the videos. To do so, the researcher picked up two kinds of utterances, i.e., 1) utterances which indicated that the subjects had corrected their misunderstanding or wrong prediction and 2) utterances that they had constructed meaning of the conversation, from the data collected in think aloud protocols and

interviews. Four factors were found and categorized into the following groups:

1) Key word or phrase

2) Tone of voice

3) Visual nonlinguistic element

4) Visual linguistic element

These four facilitating factors were divided into the same 3 categories as distracting factors. Key word or phrase is related to the subjects' linguistic knowledge. Tone of voice is related to the audio factor in the characters' conversation in the videos. The last two elements, visual nonlinguistic element and visual linguistic element, are related to the visual factor in the videos.

1) Linguistic knowledge → Key word or phrase

2) Audio factor → Tone of voice

3) Visual factor → Visual nonlinguistic element, visual linguistic element

In the next section, these categories will be analyzed in detail.

4.3.1 Key word or phrase

There is a number of studies that show knowledge of vocabulary is crucial in listening comprehension (Kelly, 1991; Goh, 1999). In this section, the researcher examines two sub-scenes that showed key words which played an important role in understanding the content of the videos.

Key word or phrase is important in understanding the content of a scene. Being unable to catch this word can lead to misunderstanding of the content or wrong prediction. Understanding of the key word enabled the subjects not only to understand the content of the scene but also to have a deeper understanding of the previous scenes

and make it easy to predict the subsequent scenes.

In the first example the key word made it possible for both LPLs and PLs to correct their misunderstanding

Sub-scene N2-1, 2

In the sub-scene N2-1, the key word is 'broken heart'. Nodame is depressed and lies down in the college campus. Ryutaro comes and talks to her. Nodame is so depressed that she cannot speak clearly. This caused both LPLs and PLs difficulties in understanding of the content.

LPL1: おなかすいたすぎかもしれない
[She may be too hungry]

LPL4: 疲れすぎ
[(She is) too tired]

PL1: 聞こえないですね。苦しいかなって言ってたのは、それだけ
[I cannot hear it. Did she say *kurushii* (suffering)? That's all.]

PL2: しゃべっている言葉はすごくなんかよく聞き取れなかったけど、でも最後の幻という言葉を聞き取りました
[I couldn't hear the words she spoke, but I understand the last word *maboroshi* (illusion)]

But in the next scene, all these subjects could make out that Ryutaro had said the word "broken heart" and understood the situation correctly.

LPL1: その友達がなんか失恋と言いました、だからお腹すいたじゃないと思いました。
[The friend said broken heart, so I thought she was not hungry.]

LPL4: What I couldn't understand all now comes clear that she's heart broken

PL1: 失恋だそうです。
[She is broken-hearted.]

PL2: さっき聞き取れなかった言葉は失恋、すぐわかっちゃったのはなんか言い換えてる。男の人がね言い換えているから。
[The words that I couldn't understand before are 'broken heart'. I understand now, because the man rephrased it.]

All these subjects did not understand why Nodame was so depressed in the first scene. But in the second scene, when they heard Ryutaro's words "broken heart", they all understood that the reason was because she was broken heart. Besides that, this key

word “broken heart” was the topic in the subsequent sub-scenes and helped the subjects to understand these sub-scenes.

In the next example, the key phrase helped LPL1 and LPL4 to understand the content of the sub-scene.

Sub-scene N2-17

In this sub-scene Nodame and Ryutaro caught the afro-haired culprit who teased Nodame secretly. The culprit replied “Don’t come near to Chiaki” to the question why he teased Nodame. This is the key phrase in this sub-scene.

LPL1: 彼女が彼に近づいて今のこのアフロ、アフロ男がなんかちょっとえーと、なんか、にくいがありますからかもしれない
[She comes close to him (Chiaki), this afro-haired guy may feel jealous.]

LPL4: This guy (Ryutaro) knows that he (the culprit) likes Chiaki and felt very, how do you say, don’t care when he say ask her don’t go near Chiaki again

This culprit likes Chiaki, and feels bad when Nodame comes close to Chiaki. So he teased her. The key phrase “Don’t come close to Chiaki” made it possible for the subjects to understand the reason why Nodame was teased badly in the previous sub-scenes. In the following scenes the story unfolded on the competition between Nodame and the culprit.

In the next example PL3 reported that he used key word with visual element to understand the sub-scene.

Sub-scene D1-7

In this scene the key phrase is ‘my bad habit’. Nobita promises his friends that he will find a dinosaur fossil. He is laughed at by all of his friends. He gets angry and runs back home. PL3 said Nobita regretted what he said. PL3 explained his process in understanding this in the think aloud protocol.

PL3: 友達に言ったことに関してはえーと少し後悔はしているかもしれません。...まずそのせりふですね。自分の悪い癖と言いました。その表情もやっぱり最初からこういうことを言わなくてよかったのになっている表情がものすごく伝わってきました
[(Nobita) may regret what he said to his friends. First, his words, he said “it’s

my bad habit". and the face, I feel from his face that he has a strong feeling that he shouldn't have said such a thing.]

This indicated that PL3 guessed the content using both Nobita's words "my bad habit" and facial expressions to understand the content of the sub-scene.

In sub-scene N2-1, 2, the subjects made inaccurate prediction but corrected it with the subsequent utterance. Gruba (2007) examined deleterious effects of visual input in news, which lead to misunderstanding of videos. He gave an example in which visual elements generated inaccurate hypothesis about the scene of news. He suggested that hypotheses made by learners while watching videos needed to be checked continually by audio input. In sub-scene N2-17, the key phrase enabled the subjects to understand the storyline better in both previous sub-scenes and/or subsequent sub-scenes. In sub-scene D1-7, the key word and visual element worked together for the subjects to understand the content of the sub-scene. This example shows that a facilitating factor (e.g., key word or phrase) works not only independently but also together with other factors (e.g., visual element).

4.3.2 Tone of voice

In animations and dramas, characters express a lot of emotion. Their emotion affects the manner in which they speak and their pronunciation. Emotion affects not only their spoken language but also their paralinguistic features such as facial expressions, postures and actions. Therefore, this facilitating factor, tone of voice, usually appears with visual element such as facial expressions, postures and actions, which also express the characters' emotion. In this study, tone of voice was used a lot by LPLs to compensate for their lower listening ability.

Sub-scene N2-7

In this sub-scene, Nodame suffers from a broken heart and tells her friend,

Ryutaro, that she doesn't want to practice music. Ryutaro encourages her to do so.

LPL2 I cannot understand but I think the girl is learning a music, don't want maybe she don't want to learn

LPL3 最後は聞こえませんから、そのこはたぶん、しっかりして、そういう言葉かな、練習しよ
[I cannot hear the last part, maybe he said get a grip or something, let's practice]

LPL2 heard Nodame's depressed voice and weary facial expression and inferred that Nodame did not want to practice. LPL3 heard Ryutaro's consoling voice and inferred that Ryutaro was encouraging Nodame to practice.

In this study, the researcher found that LPLs depended heavily upon tone of voice when they had serious difficulty in understanding the conversation. It is evident that LPLs rely on tone of voice together with visual input in order to compensate for their lower listening ability.

4.3.3 Visual factor

Visual factor is divided into two categories. One is visual linguistic element which contains linguistic element such as words or phrases in a letter, and the other is visual nonlinguistic element such as a paralinguistic element, a place and an object. The researcher will examine the visual nonlinguistic element first due to its variety.

4.3.3.1 Visual nonlinguistic element

The difference between listening comprehension and video viewing comprehension is that video comprehension has two kinds of input, i.e., audio input and visual input. Visual elements in videos play a big role in understanding videos. Even when learners do not understand a conversation or narration in videos, they can understand the content from visual input and get the gist of the message.

In 4.2.3, the researcher described distracting visual elements. In this section visual elements that facilitated the subjects' understanding of the videos are examined. The researcher divided visual element into two types: visual nonlinguistic element and visual linguistic element. First, visual nonlinguistic elements are examined. These include a character's facial expression and action, the place and the object.

The pictures of medicine and Doraemon's action helped both LPLs and PLs to understand the content in the next scene.

Sub-scene D2-2

In this scene Nobita feeds the baby dinosaur. Then Doraemon gives Nobita some medicine. The zoom is on the medicine for a few frames.

LPL1: 何の薬、トクタイなんというか、もしかしてすぐ大きくになって、あの薬かなと思って、
[What kind of medicine, *tokutai*, maybe to become big quickly, I think it's such kind of medicine.]

LPL3: I didn't catch up, so I imagine it would be where Doraemon pick up pill like stuff like imagine that that would be something grow to be able to grow quick

PL2: ポケットの Magic が出てくるものを今思い出して、今のマジックの薬ね...飲ませると飲ませてあげるとたぶん急に大きくなれるんだろうという気がちょっと想像があります
[Now I remember magic (item) in the pocket comes out, this magic medicine...if eaten, maybe it will become big suddenly, I imagine.]

LPL1, LPL3 and PL2 could not understand the conversation between Nobita and Doraemon. But they understood the content of the sub-scene from the picture in which Doraemon took out some pills from his pocket. In this case, their prior knowledge about Doraemon possessing some magic items in his pocket also helped their understanding. In this sub-scene the picture of the medicine and the action of Doraemon helped the subjects to understand the content of the videos.

In the next sub-scene visual elements were used by LPL2. In sub-scene D1-1, the picture of place and creatures helped LPL2 to understand the content of the videos.

Sub-scene D1-1

This scene is the beginning of Doraemon Scene 1 (D1). LPL2 did not understand the explanation about dinosaur and its time. But she used the visual factors from pictures of dinosaur eating food and fighting each other. Then the camera zooms on the dinosaur's finger. She understood that the topic is the dinosaur and its finger.

LPL2: I cannot heard what they are talking but I'm so so I can see the picture is talking about the dinosaur, and then is a maybe he is talking about the finger of the dinosaur

In this sub-scene the picture of place and creature and the effect of focusing on the dinosaur finger helped LPL2 to understand the content of the video.

In the next sub-scene a visual element was used by PL2. In sub-scene D1-6, PL2 mentioned the special effect in the video.

Sub-scene D1-6

In this sub-scene Nobita promises his friends that he will find a complete set of dinosaur fossil, which he himself knows is very difficult and he regrets it.

PL2: 今あのーSpecial effect というような感じで、暗くなっちゃって、困っちゃったな、しまっちゃったなって、いう感じで
[Now there is a special effect, (the background of Nobita) became dark, it looks like he is in trouble.]

In this sub-scene the background of Nobita becomes dark, which shows he is in a bad mood. This effect is often used in animation to show a character's depressed feeling.

The above examples of visual nonlinguistic elements are all from Doraemon which is an animation. In animation various types of visual nonlinguistic element are used. In sub-scene D2-2, the picture of object (medicine), action and focus helped the subjects to understand the sub-scene. In sub-scene D1-1, the picture of place, creature, action and focus are used. In sub-scene D1-6 special effects are used. In animation various types of pictures are used; for example, steam comes out from character's face to show anger of the character, stars go around character's head to show the character fell down and fainted, and character's face become dark to show his or her disappointment. These are characteristic features of animations.

On the other hand, in the drama, the researcher found three types of visual nonlinguistic elements that helped the subjects to understand the content of the videos: facial expression (Sub-scene N1-3), body movement (Sub-scene N2-19), flashback (Sub-scene N1-4).

Sub-scene N1-3

In this sub-scene Saeko advises Chiaki to apologize to his teacher but he does not follow her advice.

PL4: 女の人の顔色を見ると、やっぱりそうですね、あのなんというか疲れてる、疲れてるじゃなくて、やっぱりああ I don't know what to do みたいな感じで
[When I see the face of the woman, well, it looks like she is tired, not tired but "I don't know what to do"]

PL4 understood the feeling of Saeko from her facial expression. In this sub-scene the character's facial expressions helped the subject to understand the content of the video.

Sub-scene N2-19

In this sub-scene Nodame and the afro-haired culprit argue to decide how to fight a duel to get the right to invite Chiaki for a date. Ryutaro tries to calm them down.

PL2: すごく早口で言っているからちゃんと聞き取れなかったけれどもほんとに(勝負)するのという感じでした
[I couldn't hear clearly because he spoke very fast, but he seemed to ask whether they really compete]

勝負の言葉はわかっているから、あと言葉よりも身振りよね、身振りの方がわかっちゃった、なんかすごく戦うような
[I know the word 'competition', and then behavior rather than word, I understood by his behavior]

PL2 did not understand what Ryutaro had said, but understood his intention from his behavior when he tried to separate the two characters and calm them down.

Sub-scene N1-4

In this scene Saeko blames Chiaki for not going abroad to study. Chiaki strongly wants to go abroad to study conducting an orchestra. However, he can neither get on an airplane nor a ship due to a past experience. Saeko speaks excitedly for a long time.

LPL2: Long time ago maybe got a happened ah ah the aero plane accident
I cannot understand ya

LPL3: 飛行機のシーンだけ、あとはちょっと聞こえませんでした
[(I understand) only the scene of the airplane, I couldn't hear anything other than that.]

LPL4: He is afraid of riding the airplane and he thinks back to his childhood

The subjects understood that Chiaki experienced an airplane accident from the flashback scene although they did not understand the conversation between the characters.

4.3.3.2 Visual linguistic element

In the previous section the researcher examined visual nonlinguistic elements. In this section visual linguistic elements are analyzed. Visual linguistic elements are provided in various ways such as words or phrases in a signboard and a headline in newspapers. News and documentary programs seem to have a lot of visual linguistic elements. However, in this study there are only four visual linguistic elements due to the genre of the videos, an animation and a drama. The four elements are as follows: title of the books Nobita read (Sub-scene D1-10), a chain letter received by Nodame (Sub-scene N2-8), a note put on Nodame's back (Sub-scene N2-13), a note left in a lunch box (Sub-scene N2-14).

Sub-scene N2-14

In this sub-scene, Nodame opens the lunch box and finds a note with a message 'it was delicious. From: Go to hell club'.

LPL3: Someone ate her bento and left a memo that was delicious, I think like go to hell club

死んじゃえを直接通訳したら go to hell と同じでしょ、それはメモを見た
[If I translate *shinjae* (to die) directly, it is go to hell, isn't it. I saw the note.]

LPL3 read the note left in the lunch box and understood the message.

In this study, only four sub-scenes contain visual linguistic elements. Three of them are messages from the culprit and the other is the title of the book which Nobita reads in order to find dinosaur fossil. Animations and dramas have less visual linguistic elements compared to news and documentary programs. Gruba (2007) reported that news have a lot of visual linguistic elements such as subtitles, logo and headlines. He suggested that these elements were used as signposts and enabled learners to get key information. Gruba (2007) also suggested that visual elements served to help learners' understanding in two ways; one was to compensate the audio input which learners could not understand and the other was to confirm what learners had understood. However, in this study the researcher found that the subjects used visual elements to overcome their difficulties in understanding the videos, but not to confirm what they had understood.

From the analyses of Research Question 3, the researcher identified the factors that helped the subjects to understand the videos: key word or phrase, tone of voice, visual nonlinguistic element and visual linguistic element. As for visual nonlinguistic element, the animation, Doraemon, had a larger variety of elements than the drama, Nodame Cantabile.

4.4 Conclusion

This chapter addressed the three research questions mentioned in Chapter 1 and Chapter 3. For Research Question 1, i.e., the difference in strategies used between PLs and LPLs, the researcher found that the top four frequent strategies used by LPLs and PLs are same (audio inferencing, visual inferencing, summarization, metacognitive strategy). PLs' higher listening ability allowed them to use more metacognitive strategies than LPLs. For Research Question 2, the researcher found that factors that caused the subjects difficulties in understanding the video were: unknown word or phrase, grammatical difficulty, long utterance, unclear pronunciation, fast speech rate

and distracting visual. Some distracting factors caused different level of understanding between LPLs and PLs. Lastly, for Research Question 3, the researcher found the factors that helped the subjects to understand the videos. Those are key word or phrase, tone of voice, visual nonlinguistic element and visual linguistic element.

In this chapter, the researcher has answered the research questions which were mentioned in Chapter 1 and Chapter 3. In the next chapter, the researcher will discuss the implications of these findings, suggestions for future researches and the conclusion of this study.