Teaching Syllogism in Academic Writing Class

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1. Introduction

L2 speakers generally resort to the same strategies they have found effective in L1 (Dulay and Burt, Krashen). According to Kanel (2000), foreign language learners must overcome four blocks: linguistic, values, personality and identity. The author will focus on one of the four: values. In the area of values, he will discuss how writers need to shift their communicative pattern from "Listener Talk" into "Speaker Talk." According to Yamada (1997), the former is the strategy in which the responsibility of communication rests with the audience, making listener interpretation not only the key but also the main mode of communication while the latter is the one in which the responsibility for communication rests primarily with the speaker. When Japanese and Americans are compared, it can be said that Japanese belong to the "Listener Talk" group and that Americans do to the "Speaker Talk" group. When the message sender is Japanese, the receiver is American, English is used as the tool for written communication, the message should be given via the "Speaker Talk" strategy, that is, as explicitly as possible. Explicitness requires a monitoring process. Flower and Hayes (1981) mentions that as a writer becomes more mature, he or she sets a goal and proceeds to it by using a problem-solving process and monitoring. According to Uchida (1998), monitoring in writing is defined as the function which checks the whole writing process and whether it is proceeding towards the appropriate goals. Japanese students neglect to do such monitoring when they write in English. Monitoring can be facilitated by applying syllogism properly.

2. 1. What is syllogism?

This section will discuss more in detail why syllogism is needed and what it is. To begin with, there often exists what Bolinger (1981) refers to as an inferential gap between a message sender's reference and a receiver's inference. To illustrate this gap, a Japanese student in this author's class once introduced her father by writing, "My father is black." Native speakers of English would normally interpret this statement by making the assumption that her father is of African descent. Hamamoto (2001) states that an assumption is the willing acceptance of a given statement, the truth or validity of which cannot be assured 100 %. However, since the author is Japanese, he easily guessed that her actual message was "My father has a dark skin." or "My father is sunburned." The author then confirmed with the student that this was her actual message (Hirayanagi, 2003). Why did this inferential gap occur? This gap would not have occurred, if the message sender had realized that the sender and receiver of a message do not necessarily share the same background knowledge. To prevent such a gap from occurring, it is necessary to shift the writer's communication

strategy from "Listener Talk" to "Speaker Talk."

In order to make such a change, syllogism should be used properly in the monitoring process, because the credibility of the warrant, which is what is take for granted, thought of as common sense or believed as a stereotype, needs to be verified.

Condon (1980) states that syllogism is a process which shows how three parts, ① the evidence or a particular statement, ② the warrant or a universal statement and ③ the claim or conclusion, are chosen and arranged in order to persuade the audience. The claim for the above-mentioned student was "My father is black." The data is that she used an English word for the Japanese word "*kuroi*" to describe her father. The warrant is that the Japanese word for the English "black" is *kuroi* and it is implied that these words can be interchangeably used. However, the second part of this warrant is not true, so it can be said that this student could not apply the syllogism properly, because she did not verify the validity of the warrant.

According to Nouchi (2003), syllogism is as follows: The subject of the claim is represented by S(Subject), the predicative part is represented by P(Predicate) and the term appearing in both the data and the warrant is represented by M(Middle term). The formula and its typical example are as follows:

(Formula) [Warrant]   M is P.
          [Data]   S is M.
          [Claim]   ∴S is P.
(Example) [Warrant]   Every man dies.
          [Data]   Socrates is a man.
          [Claim]   ∴Socrates dies.

2.2. Syllogism in our daily life

Without our awareness, syllogism is often being applied in our daily life. This reflects that Japanese students miss opportunities to study syllogism in their academic writing class when they write about their daily lives. The author will show how students need to verify a warrant in order to confirm the credibility of the syllogism underlying the assumptions made in our daily life. A total affirmative sentence is used as a warrant.

Example 1 The author's elder daughter is taller than her younger sister. (This
          is not true.)

The author has two daughters. One is 20 and the other is 18. His relatives, who were not familiar with them, made the assumption based on common experience that the elder daughter is taller than the younger one. When they met his daughters, they called the elder one A and the younger one B, because A is taller than B. The fact is that the elder is B and that the younger is A (Hirayanagi, 2002). Why did a misconception occur? This is because they did not confirm whether or not their idea or warrant proved by many people's experience is always true. This inference is referred to as deductive inference: a claim is inferred from a general statement that an elder daughter or son is taller than a younger one. In

this case, the warrant, data, and claim are as follows:

[Warrant] An elder daughter is taller than a younger one.
[Data] A is taller than B.
[Claim] The author's relatives called his elder daughter A and the younger
       one B. In other words, they called his daughters wrong.

Example 2   Returnees ought to be good speakers of English.

Some years ago the author heard a student saying to another student who did not seem to be good at speaking English, "Are you really a returnee?" The student who said this had an assumption or a warrant that if someone is a returnee, he or she should speak English fluently. However, this assumption or warrant is not always true. In this case, the following are the warrant, data and claim.

[Warrant] Any returnee should speak English well.
[Data] He was a returnee.
[Claim] He should have had a good command of English.

The credibility of the warrant is not verified. What does this mean? According to *Oxford Advanced Learner's Dictionary*, a returnee is a person who returns to his or her own country, after living in another country. "Another country" means a country other than his or her country. It could refer to either a country where English is used as the native language and one where English is not. The expression, "Living in another country" does not specify the school that a person may have attended. Returnees can be classified into four categories. First, they can be divided into two groups: the ones who lived in English speaking countries and the ones who did not. Then, persons in the former group can be divided into two subgroups: those who attended local schools and those who went to Japanese schools. Returnees who did not live in English speaking countries can be grouped in the same way. Thus, all returnees can be classified into four groups. Unless a returnee belongs to the group of those who studied at a local school in an English speaking country, he might have difficulty in speaking English fluently. The first student mistakenly believed in the warrant that the group of all returnees and the group of people having a good command of English are totally identical. The syllogism for this student's claim is not valid because the warrant that any returnee should speak English well is not credible. Let us think of the following two groups, (C) and (D). This is an analysis of whether a warrant can be verified or not.
(C) A group of returnees who attended a local school in an English speaking
    country
(D) A group of people of being able to speak English well
The logical symbol for the two groups are as follows: $(C) \supset (D)$ (C) $\therefore (C) \supset (D)$ This means that if (C) is true, then (D) is also true. In other words, all the elements belonging to

(C) automatically belong to (D) as well. When this logical symbol is analyzed with the terminology of a sufficient condition & a necessary condition, it can be said that (C) is the sufficient condition for (D) and that (D) is the necessary condition for (C). When the logical symbol is (C)⊃(D), it can be said that all the Cs are D and that the illustration by a diagram is as follows:
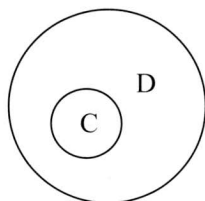
Example 3   He is an English teacher so he must be a good speaker of
   English.

Let us think of a group (E) which is for English teachers and of another group (F) which is for people who have a good command of English. The following are the warrant, data and claim.

[Warrant] Any Japanese English teacher in Japan is a good speaker of English.
[Data] He is an English teacher.
[Claim] He is a good speaker of English.

Being an English teacher is not the sufficient condition for the assumption that he has a good command of English, because all Japanese English teachers do not have a good command of English. The latter is not the necessary condition for the former, either. The diagram for these two groups are as follows:
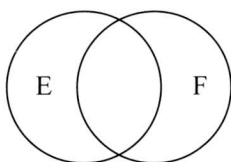
2.3. Implication in order to bridge the inferential gap

What should be checked for the credibility of a warrant? Of course, linguistic rules, especially implication and the difference between a total affirmative sentence and a generic affirmative one are important. Corder (1967) mentions that a distinction should be made between an error which results from incomplete knowledge and a mistake caused by fatigue or carelessness. Burt and Kiparshy (1974) says that errors can be divided into two: global and local. The former refers to errors which affects overall comprehension, while the latter to those that do not. In this paper, the author will focus on global errors. This means that local

ones in the examples and samples listed below have already been corrected by the author. The following are examples of writing which triggered the inferential gap.

Sample1

(G 1)--- I will compare Osaka with Aomori. <u>Osaka is very warm but Aomori is very cold.</u>

(H 1) Osaka is warmer than Aomori in all the seasons.

(J 1) Osaka is very warm in all the seasons while Aomori is very cold in all the seasons.

(G) is a sentence that was written by a student and in which some local errors have been eliminated in order to focus on global errors. (H) is an idea intended to be conveyed by the message sender, while (J) is the idea interpreted by its receiver. This sentence (G 1) does not contain any grammatical errors in it, but the assumption conveyed by this sentence is not always true. This is because in Osaka, it is not "very warm" in winter and in Aomori, it is not "very cold" in summer. One reason why this error was made is that the student who wrote this did not realize the underlined part implies the assumption (J 1), because the sentence in the underlined part contains two total affirmative sentences, indicating that the climate is the same in all the seasons. Why does such an error occur? One of the possible reasons would be the fact that Japanese students do not differentiate generic affirmative sentences from total affirmative ones. The underlined part of this example indicates it is warm in Osaka in all seasons and it is cold in Aomori in all season as well. One should realize what a total affirmative sentence implies. The following are the warrant, data and claim.

[Warrant] The climate does not change from season to season.

[Data] Osaka is very warm in one season.

[Claim] Osaka is very warm.

Because the warrant is not verified, this claim is not true. If this student had understood what the sentence (G 1) implied, he would not have mentioned this. What is an implication, then? According to Koizumi et al (2001), the following sentence (L) can be an implication of (K).

(K) The anarchist assassinated the emperor.

(L) The emperor died.

If the assumption of the sentence (K) is true, the one of the sentence (L) is also true. It is a logical corollary. Therefore, it can be said that the assumption (K) implies the message given by the sentence (L).

Sample 2

(G 2) Other than English, Chinese is the foreign language that is offered in our university.

(H 2) Other than English, Chinese is a foreign language that is offered in our

university.

(J 2) Other than English, Chinese is the only foreign language that is offered
in our university.

When a student was asked what foreign language courses besides English were offered in his university, he answered with the sentence (G 2), although some other foreign language courses are offered there. He should have used the sentence (H 2). Although he had the knowledge of how "a" and "the" differ, he did not notice that the sentence (G 2) implies the message given by the sentence (J 2). This is an example of how important it is to understand how a word implies.

2.4. Studying syllogism with some samples

Sample 3

Misunderstanding often happens between Americans and Japanese.

(G 3) Japanese use non-verbal communication, but Americans use language.

(H 3) Japanese rely on non-verbal communication more than Americans.

(J 3) Japanese use only non-verbal communication while Americans use only
language.

The above-mentioned example was written by the author's student after she read a story about an American boy and a Japanese girl (Hirayanagi, 2001). The American boy wanted to have a date with the Japanese girl and asked her for one. She wanted to convey a negative message. She just smiled in order not to hurt his feeling. She just intended to convey her message with her smile. He misinterpreted it. Then this student was asked to make a summary of this story. She should have realized that the underlined part is a total affirmative sentence and implies the assumption (J 3). The underlined part implies that Japanese do not use verbal communication but use only non-verbal communication and the latter does that Americans use only verbal communication. The warrant, data, and claim of the first half of (G 3) are as follows:

[Warrant] She was a Japanese.

[Data]   She only smiled.

[Claim] Japanese use only non-verbal communication as a means of
communication.

With an example of only one person, she tried making a claim. The number of examples used to make as claim is too small. Therefore, the claim is not true. This claim was made, based on a particular statement. This is an example of applying inductive inference improperly. With a small number of examples, a general claim cannot be made. The warrant, data and claim of the second half of (G 3) are as follows:

[Warrant] He was an American.

[Data] He did not understand non-verbal communication.

[Claim] Americans use only verbal communication as a means of
communication.

Sample 4

I will compare my sister and me. First, she goes to a national university. She studied more than me in order to pass the entrance exam. So she is smarter than me.

[Warrant] Those who attend a national university are smarter than those who
don't.

[Data] "My sister" studied more than "me" to pass the entrance exam and
goes to a national university.

[Claim] "My sister" is smarter than "me."

Let us form two groups: the first group (M) is those who attend a national university and the second (N) for smart students. Because all the national students cannot be smart, the warrant is not verified. This is another example of applying inductive inference improperly. The diagram for the two groups are as follows:
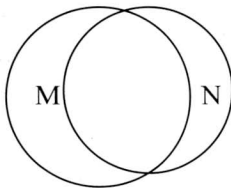
Sample 5

I am a technical high school graduate, so in English I am far behind those who attended a school with general courses.

[Warrant] In a technical school, because the number of the classes related to
technical classes is large, students do not have as many English
classes as other students who study general courses as a non-
technical school.

[Data] "I" graduated from a technical high school.

[Claim] In terms of the English skill, "I" am far behind those who attended
the general courses.

The problem in the student's writing is that the warrant was omitted. This is an example where syllogism called deductive inference was not applied properly.

Sample 6

My part time job is to make sushi. I work for five hours at a sushi shop on weekends. It is difficult to make sushi. I was injured many times.

[Warrant] It is necessary to use a Japanese knife to make sushi and the
student was not familiar with how to use it.
[Data]   "I" work at a sushi shop and make sushi.
[Claim] "I" was injured many times.

The problem in this logical development of the student's writing is that the warrant was missing, so the non-Japanese readers cannot understand why this student was injured. This is another example where syllogism called deductive inference was not applied properly.

Sample 7

I agree with the Chiyoda Ward's ban smoking on the street, because smokers give dangerous effects to children and old people. They don't understand their smoking is a very dangerous to our body. So I am opposed to outdoor smoking.

The Yomiuri Shimbun ran a Readers' Forum on July 27 2002, regarding Chiyoda Ward's decision to ban smoking on the street. One contributor wrote, "While the ban has some advantages, it also has serious disadvantages." She mentioned some advantages and the disadvantages," and the gist of her message can be paraphrased in the following way:

  While the outdoor smoking ban will decrease complaints from nonsmokers
  in the prohibited areas, the situation in unrestricted areas will get worse.
  People should stop smoking outdoors. However, this does not mean that
  outdoor smoking should be restricted by ordinances.

The author presented the students the topic, "Are you for or against the Chiyoda Ward's ban smoking on the street?" to ask them to write their opinions. For logical development, people should be categorized into two groups first: a group for those who support outdoor smoking and another group (O) for those who do not. Secondly, the latter should be divided into two subgroups: a group (P) of those who support the smoking ban by the local authority and another group those who do not support the ordinance. In other words, like the contributor mentioned above, all the people who oppose outdoor smoking do not support the ban by the authority. In contrast, the assumption made in this example of student writing does not indicate that he realized the implication that a group of people opposing the outdoor smoking can be divided into two subgroups. The diagram for the two groups (O) and (P) are as follows:
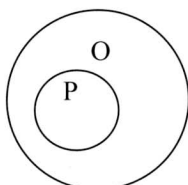
The warrant, data, and claim are as follows:

[Warrant] The opinion on outdoor smoking and the policy of the Chiyoda
   Ward's ban smoking on the street are totally identical.
[Data] He was asked to write his opinion on the title, "Are you for or against
  the Chiyoda Ward's ban smoking on the street?"
[Claim] At first, he discussed the policy of the Chiyoda Ward's ban smoking
   on the street and ended at discussing the outside smoking ban, which
   is a related but a different topic.

3. Conclusion

We are not fully aware of the fact that syllogism is not properly applied in our daily life. Logical development requires syllogism. In academic writing class, teachers can teach syllogism to students, indicating that monitoring in academic writing is important to confirm that syllogism is being properly applied. Thus, students can avoid creating an inference gap between a message sender's reference and a receiver's inference. Syllogism is composed of three elements: a warrant (general statement), data (particular statement) and a claim (conclusion). Students have to check the credibility of a warrant in order to confirm whether or not a syllogism is being properly applied. In order to check a warrant, the key is the knowledge of linguistic rules such as implication and the difference between a total affirmative sentence and a generic affirmative one. The main reason why Japanese students often neglect to explicitly state a warrant or forget to check the credibility of a warrant is that they did not shift their communication strategy from "Listener Talk" to "Speaker Talk," where the responsibility rests with a "speaker." The use of logical symbols, and diagrams to illustrate groups, as well as the attention to sufficient and necessary conditions help students to check the credibility of a warrant.

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