

Consciousness and Output

-- A Case Study of College Students' English Writing

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Abstract

By investigating the relationship between awareness and students' writing output, this paper discusses the role of awareness in second language acquisition. Firstly, this paper introduces the theories of consciousness, Swain's understandable output hypothesis, and the relationship between consciousness and output. Then, a case study of students' writing was conducted. There are 28 non-English majors in Xiamen University. This study includes two writing tasks and a class on writing skills, especially on the choice of words and the use of sentence structure. This paper mainly focuses on the progress of the subjects in vocabulary selection and sentence structure use. Through comparing the two different kinds of writings, we find that if the subjects pay attention to vocabulary selection and sentence structures consciously in writing, their writing will be improved. We found that, compared with less successful students, more successful students may use more high-frequency words in their writing and learn to use more relative clauses. We come to a conclusion that consciousness plays an important role, which can improve the output in second language acquisition.

Keywords

Consciousness; Output; Writing; English Teaching.

1. Introduction

How can a person acquire his/her knowledge of a second language? How does he/she get the language knowledge stored and use the language? These are all issues that researchers in the field of second language acquisition have been paying attention to and studying. Many researchers have studied the second language acquisition model. However, it was not until the recent decades that researchers have begun to study second language acquisition in combination with learners' mental state (Dai, 2005). Take consciousness as an example. Researchers such as Krashen (1981) and Schmidt (1990) have been focusing on this problem for many years. They think that awareness is related to learners' second language acquisition, and it is of great significance to understand the role of awareness in second language acquisition. However, as many other aspects in linguistics, disagreement and heated discussions focused on this topic among researchers still continue to the present day.

Since Krashen's input hypothesis (Krashen 1981) was put forward, researchers represented by Merrill Swain have discussed and studied whether output affects learners' interlanguage development. He put forward a famous comprehensible output hypothesis (Swain 1985), which holds that comprehensible output, as comprehensible input, also plays a certain role in second language acquisition. She suggested that learners could learn some functions from their learning achievements, such as raising awareness and hypothesis testing. Similarly, learners can improve their output through these functions. In view of the fact that many researchers have studied consciousness, input and output in second language acquisition, this paper attempts to explore the role of consciousness in the generation of learners' output.

2. Consciousness and Output

2.1. Consciousness

The notion that learners possess two kinds of knowledge—explicit and implicit, is widely accepted among researchers (Ellis 1997). However, researchers haven't reached a consensus on the role of consciousness in the development of second language. This paper discusses the definitions of consciousness and Krashen and Schmitt's views of consciousness.

2.1.1. Definition of Consciousness

Consciousness is a psychological concept, which is related to unconsciousness describing people's mental state. The Longman Dictionary of Language Teaching and Applied Linguistics defines consciousness as a kind of subjective experience. Specifically, it refers to the consciousness and stimulation in input and a person's mental state. Dai (2005) notes that the concept of consciousness and unconsciousness is still rather confusing. In the research of SLA, researchers also use explicit/implicit or intentional/incidental to substitute consciousness/unconsciousness.

2.1.2. Krashen's View of Consciousness

Krashen believes that acquisition is subconscious. Krashen (1981; 1982) claims that learners possess an 'acquired system' and a 'learned system' which are totally independent. The former is the development of subconscious process, while the latter is the result of conscious process. He admitted that the difference of acquisition/learning reflected the difference of implicit/explicit. He also insists that 'learned' knowledge is completely separate and cannot be converted into 'acquired' knowledge, which is known as the non-interface position. Krashen argues that 'acquired knowledge' can only be developed when the learner's attention is focused on message conveyance, and that neither practice nor error correction enables 'learned knowledge' to become 'acquired'. He claims that utterances are initiated by the 'acquired' system, and the 'learned' system only plays its role when learners monitor the output from it. Monitoring is possible when learners are focused on form rather than meaning and have sufficient time to access their 'learned' knowledge.

Krashen's concept of consciousness has aroused heated discussion and arguments in the field of second language acquisition. Ellis (1994: 55) pointed out that Krashen's distinction "contradicts skill-building theories of second language acquisition, according to which learners can achieve grammatical accuracy by automating 'learned' knowledge through practice.", according to which learners can achieve grammatical accuracy by automatizing 'learned' knowledge through practice". (Ellis 1997: 359) has argued that "Krashen's acquired/learned distinction is not tenable because it cannot be falsified; Krashen has failed to provide adequate definitions of what he means by 'subconscious' and 'conscious', and 'has provided no way of independently determining whether a given process involves acquisition or learning". Dai (2005) also points out that Krashen doesn't give a clear definition as far as consciousness and subconsciousness are concerned, whether the role of consciousness takes effect in the process of language input or output, and whether it refers to the whole process or just part.

2.1.3. Schmidt's View of Consciousness

Schmidt believes that conscious attention is a necessary and a sufficient condition for language learning, because second language acquisition largely depends on what learners notice in the input of the target language and their understanding of the noticed input. Schmidt (1990,1993,1994) classified consciousness in language learning into three categories: consciousness as consciousness, consciousness as intention and consciousness as knowledge, and thought it was very important to distinguish different aspects of consciousness in second language acquisition.

First of all, the consciousness as consciousness means that learners are aware of what they are learning. Awareness has different levels or degrees: perception, attention (focus awareness) and understanding. Perceptions is not necessarily conscious, but attention involving personal experience or "subjective experience" needs to focus on consciousness, while 'understanding' involves conscious analysis and comparison with what has been noticed on previous occasions. Secondly, as the consciousness as intention, Schmidt believes that not all intentions are conscious. Learners can deliberately start learning something, or they can learn something by the way when their main attention is focused on other goal. In this respect, Schmidt carefully distinguished the passive consciousness from the active intention. Intention is either conscious or unconscious. Finally, as the consciousness as knowledge, Schmidt believes that the contrast between explicit and implicit represents the continuum. However, he pointed out that there is no consensus among researchers on where the boundaries of conscious knowledge should be. According to Schmidt (1995: 20), "the noticing hypothesis states that what learners notice in input is what becomes intake for learning". Schmidt believes that more attention will lead to more absorption. In order to give a clear explanation for this hypothesis, Ellis proposes the following model.

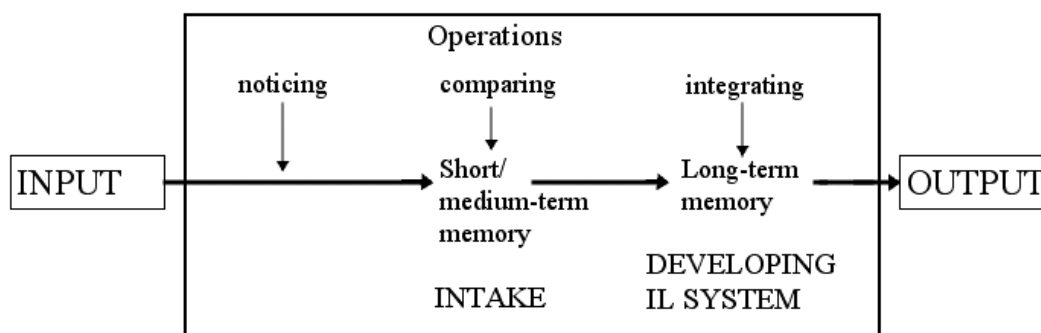


Figure 1. The process of learning implicit knowledge

From Figure 1, we can see that in the first stage, the input becomes absorption. Learners notice language features in the input, absorbing them into their short-term memories, and comparing them with the features of the output. With regard to short-term memory, Jeremy Cross (2002:3) suggests that,

"1) consciousness and short-term memory are essentially the same; 2) that for language items to be stored in long-term memory they must be processed in short-term memory; and 3) that items not processed into short-term memory or not further encoded into long-term memory from short-term memory will be lost. Schmidt (1990: 136) therefore concludes, 'if consciousness is indeed equivalent to the short term store, this amounts to a claim that storage without conscious awareness is impossible'".

In the second stage, intake is absorbed into the learner's interlanguage system and only the part of becoming long-term memory changes to this system. When referring to Schmidt's theory, which distinguishes three aspects of consciousness and argues that no matter whether learning is intentional or incidental, it involves conscious attention to features in the input, Ellis (1994:55) considers "the distinction is important and helpful. It helps us to see that when Krashen talks about 'acquisition' being 'incidental' and 'subconscious' he has failed to recognize that 'incidental' acquisition might in fact still involve some degree of conscious 'attention' to input". That is, learning incidentally is not the same as subconscious learning. Generally speaking, Ellis (1997) thinks that the discussion of consciousness in second language acquisition is too simplistic, because it only implies the difference between conscious learning

and subconscious acquisition. He argues that Krashen's sense of 'acquisition' can involve at least some degree of consciousness (in noticing and noticing the gap). Explicit knowledge is viewed as a facilitator of implicit knowledge, helping learners to notice grammatical features in the input "which they would otherwise miss and also to compare what they notice with what they produce" (Ellis 1997: 362).

2.2. Swain's Comprehensible Output Hypothesis

After Krashen's comprehensible input hypothesis, many teachers and researchers have been concentrating on the roles of input and interaction in second acquisition, but also doubt Krashen's "non-interface position. Meanwhile the issue of whether output plays a part in interlanguage development arouses researchers' attention. Krashen believes that learners' own output can be used as their input for language acquisition, which is the only way for learners to learn from output. He maintains that 'speaking is the result of acquisition not its cause'. Swain studied French learners in an immersion setting, that is, instruction was carried out in French. She notices that learners' comprehension nearly reach native level, but their production abilities lag far behind, through studying she proposes her famous comprehensible output hypothesis. In the hypothesis, Swain (1985) argues about the importance of output production in language development, claiming that the development of a learner's communicative competence does not merely depend on comprehensible input, comprehensible output also plays an independent and indispensable role second language acquisition. "Output may stimulate learners to move from semantic, open-ended, nondeterministic, strategic processing prevalent in comprehension to the complete grammatical processing needed for accurate production. Output, thus, would seem to have a potentially significant role in the development of syntax and morphology" (Swain 1995: 128). Learners need to be "pushed" in their output, "pushed toward the delivery of a message that is not only conveyed, but that is conveyed precisely, coherently, and appropriately" (Swain 1985: 249).

In this hypothesis, Swain puts forward some specific functions that learners can learn from their own output. Firstly, output promotes noticing, which means output can serve a consciousness-raising function by helping learners to notice gaps in their interlanguages. In other words, learners may realize that they lack some characteristic grammar knowledge when trying to speak or write. Secondly, output is helpful for learners to test hypotheses. Learners can try a rule to see if it will lead to successful communication or negative feedback. Thirdly, learners sometimes talk about their own output, find out the problems with it and discussing ways to correct them.

2.3 The relationship between consciousness and output

Although researchers have been paying attention to the role of consciousness in second language acquisition for many years, it is still difficult to answer the following questions: What role does consciousness play in learners' output process? According to Swain's hypothesis, we know that output can not only improve learners' fluency in the target language, but also promote attention and produce more understandable input. If this is the case, can learners obtain better output by consciously searching language knowledge while processing? Based on the assumption that consciousness can improve output, this paper designs the following case study.

3. Research Methodology

3.1. Subject

The subject of this study is the first-year students of non-English majors in Xiamen University. They are randomly sampled from two different majors in this university.

Table 1. Distribution of subjects of two different majors

Major	Number of Subjects	percent of subjects
Chemistry	15	53.6%
Chemical engineering	13	46.4%

The proficiency of these students is medium. They have never taken CET-4 before. At present, they are taking the course "New Horizon College English ". This is an intensive course. Writing exercises are designed in the course, but they are usually not given priority in class.

3.2. Method

Firstly, students were required to write a composition of 150 or so on the topic of "How to Solve the Problem of Heavy Traffic" within 30 minutes.

So far, subjects have not been advised how to improve their writing level, and they are not allowed to quote any references materials when writing. After 30 minutes, the scripts were collected and marked. In the next class, subjects' compositions were returned to them, and the teacher gave suggestions on how to improve their compositions in class, especially in terms of phrasing and making sentence. Half an hour later, all the subjects were asked to write a short essay of about 150 minutes on the topic of "No Smoking".

Table 2. Two exam scores (Total score is 15)

subjects score chemistry majors			subjects score chemical engineering majors		
1	8	8	1	6.5	8
2	8	8.5	2	7	9
3	8	8	3	8.5	7.5
4	8.5	9.5	4	6.5	7.5
5	8	9	5	6.5	8.5
6	8.5	8.5	6	7	8.5
7	7.5	8.5	7	8	8
8	7	8	8	7.5	8
9	7	7	9	9	9.5
10	9	8.5	10	7	8
11	7	8.5	11	8	8
12	7.5	8	12	7	8
13	6.5	8.5	13	8	8
14	7.5	9.5			
15	7	8.5			

3.3. Result

3.3.1. Statistics

The author compares the scores in two tests, as shown in Table 2.

Table 3. Subject progress

Subjects	Number of Subjects	percent of subjects
Chemistry	10	66.7%
Chemical Engineering	9	69.2%

3.4. Discussion

From the first article, the subjects found that they had a good command of grammar in their writing, but they were poor in vocabulary and sentence structure. Some verbs, such as think, get, give, and make were overused in their writing. In writing, a simpler sentence structures than relative clauses were used. As for the overuse of verbs, in the following example, the verbs in italics are overused where other synonyms could be substituted. We suggest using synonyms in parentheses.

1) I think it's a good way to solve the traffic jam problem. But I think the best way is that everyone in the city should observe the traffic rules. (I believe it's a good way to solve the problem of traffic jam.. But I suggest the best way is that everyone in the city should obey the traffic regulations..)

2) All these leads the number of private cars rocket up, so make the roads getting crowded...traffic law more strict to make people drive more carefully. (All this has led to a sharp increase in the number of private cars, so the roads have become crowded, traffic regulations are stricter, and people are more careful when driving.)

3) Careless driving makes more and more traffic accident. The solution is that more public bus routes should be made. (Careless driving leads to more and more traffic accidents. The solution is to build more bus routes.)

When it comes to sentence structures, we find that subjects seldom use relative clauses in writing. In the following example, a simple sentence could be replaced with a relative clause. We suggest putting a relative clause in parentheses.

1) People waste much time on road; even miss some important meeting or work. This makes everyone really helpless. (People waste much time on road even miss some important meetings or work, all of which makes everyone really helpless.)

2) More and more people are getting richer and richer. This make many people can buy cars. (More and more people are getting richer and richer, which makes them can afford cars)

3) If there is a traffic jam, a lot more gasoline will be wasted; it harms the environment, either. (If there is a traffic jam, more gasoline will be wasted and by which environment is harmed.)

As for the choice of words, according to Lian (1993), compared with Chinese, one of the most remarkable features of English is that English tends to avoid word repetition. From subjects' first writing, we found that the subjects overused many high-frequency words such as think, get, give, and make. The teacher thinks that students of this level have enough vocabulary input in their memory except for these high-frequency words. They didn't replace high-frequency words with low-frequency words such as demands, persistence, suggestions and consideration, partly because they didn't improve their awareness of word selection. Once their awareness is raised, their writing output will be greatly improved. Therefore, in the next class, suggestions are given on how to choose words and sentence structures. As for the choice of words, students are encouraged to use synonyms to avoid repeated use. Take think as an example, there is no doubt that this word is a high-frequency word, because it often appears in their writing, so it has been stored in the long-term memory of the subjects. If subjects can consciously retrieve some words synonymous with thinking, for example, replace them with words like think, for example, using words like suggest, claim, insist, consider, then the output will be improved in

terms of word selection. According to Shen (2003: 79) who investigates the occurrences of high-frequency verbs in English written by Chinese EFL learners, “the more ‘unusual’ or ‘infrequent’ words learners appear to have control over, the higher their expected level of proficiency will be. The worse the student ‘test scores, the more general, abstract, delexicalized or grammaticalized uses at the expense of idiomatic collocations.” In the study, we find that in the second piece of writing, the more able students use more low frequency words in their writing than less able students. The following examples shows the choice of words in the second writing task by the students with higher abilities.

1) More and more people hold the opinion that smoking does harm to health and it is a waste of money. If we follow these two methods, I believe more and more people will give up smoking in the future.

2) Many youngsters take it for granted that smoking make them look mature and charming. ...you must be aware of the harm of smoking and make up your mind to give it up.

3) Some of the smokers believe that smoking can ease their social pressure. Others insist that smoking is a fashionable habit.

As for sentence structures of English, according to He (1993)'s research, compared with Chinese, another remarkable feature of English is that there are many relative clauses in English than in Chinese. The mastery of English relative clause reflects the level of learner 'English. Because these subjects have passed the national college entrance examination and belong to the second-level English class of Xiamen University, the teacher thinks that they have a good grasp of relative clause. However, from subjects' first writing, we found that they used a lot of simple sentences, not relative clauses. We think that if they are used to using relative clause in writing, then their output will be strengthened. Therefore, in class, we encourage students to use relative clauses in their writing, and provide examples of relative clauses. In the second writing task, we found that there were more relative clauses in the subjects' writing than in the first writing task, as shown in the following examples.

1) It is reported that your lifetime will be cut down five seconds if you have one cigarette.

2) It would be good news for many people if smokers could stop smoking.

3)The environment of the families, which affect the youths greatly, also can't be overlooked.

Therefore, from this study, we find that if the students are conscious, the English writing level of the subjects can be greatly improved. However, unlike the two objective and statistical concepts of word count and word frequency, consciousness belongs to a person's cognitive field, which is subjective to some extent, and its duration, frequency and degree of occurrence on the subjects are difficult to test. Therefore, in this study, the role of consciousness in the subjects' writing output is mainly judged through comparing two different scores of the subjects. It is difficult to test how much awareness is put into writing, but we know that vocabulary selection and sentence structure awareness are helpful for most subjects to improve their writing. We believe that the low-frequency words and sentence structures stored by students in the short-term memory can be transferred to high-frequency words and sentence structures through conscious use.

4. Enlightenment in Teaching

Without notice, it is impossible to have high-quality output. To gain better output effects, the following are a number of pedagogical suggestions.

(1) Formal instruction

Ellis (1997: 703) notes that “formal instruction involves some attempt to focus learners’ attention on specific properties of the L2 so that they will learn them.” Learners can be provided with structured input designed to help them learn a rule or item, or they can be provided with

clear information about a rule or item. This structured and differentiated input helps learners pay attention by concentrating attention and enhancing their awareness of language features. Schmidt (1990) also believes that by establishing language expectations, teaching may play an important role in making learners pay attention to language features.

(2) Contrastive pedagogy

Lian(1993) thought that in order to master English, learners must understand the characteristics of the language. The most effective way to understand the characteristics of this language is to compare it with the mother tongue. Only when learners realize that new language features are inconsistent with their current interlanguage version, will these features become part of their developing interlanguage. Similarly, Schmidt and Flotats (1986) pointed out the importance of "attention gap", that is to say, learners need to compare their input and output on the basis of the existing interlanguage system. In this way, learners really understand the language.

(3) Reflection and examination

Students should be given more opportunities to reflect in the classroom. Swain believes that the reflection and negotiation of the output form can promote the output effect. Take writing as an example. After students finish writing in class, they can be given opportunities and time to pay attention to the form of output. For example, is it appropriate to write this way? Are there any other different expressions for this word? Is this the right word for me? By asking questions themselves, learners may notice the characteristics of the target language, so as to truly master its use.

(4) Practicing

One of the most effective ways of learning English is to practice. As an old saying goes, "Practice makes perfect." We find that those writers who are not very successful also use a large number of high-frequency words and rules when speaking, while successful writers consciously learn to use low-frequency words and rules. We find that those less successful writers use a lot of high-frequency words and rules also in speaking, while successful ones consciously learn to use low-frequency words and rules. So we believe that if learners keep on practicing, consciously use infrequent but not awkward words and rules and deliberately pay attention to the linguistic features, they can familiarize themselves with what they try. Through practice, you can transfer the low-frequency words and rules to high-frequency words and rules.

5. Conclusion

It can be seen that there are various views regarding the role of consciousness in second language acquisition. Both Krashen's point of view and Schmidt's "Attention Hypothesis" have contributed to the debate on consciousness in second language acquisition. There is no doubt that consciousness not only plays an indispensable role in language input and output. Swain's output hypothesis further inspires the importance of awareness in second language acquisition. Output can promote the attention. Similarly, consciousness can also increase production.

From our findings, we can conclude that consciousness plays an important role in the output of second language acquisition. However, there are some limitations in our research. First of all, the experimental group is a bit small, and there is no control group in the study. On the other hand, consciousness is a subjective concept, which is difficult to test. Therefore, it is necessary to strengthen the discovery based on the scores of the subjects. In any case, the role of consciousness is a question worth discussing.

References

- [1] R.Ellis: The Study of Second Language Acquisition(Oxford University Press, UK 1994), p. 55.

- [2] R.Ellis: SLA Research and Language Teaching (Oxford University Press, UK 1997), p.359-362.
- [3] Information on:<http://www-writing.berkeley.edu/TESL-EJ/ej23/a2.html>
- [4] S. Krashen: Principles and practice in second language acquisition(Pergamon Press, USA 1982)
- [5] B. McLaughlin: Theories of Second Language Learning (Edward Arnold, UK 1987), p. 22.
- [6] R.Schmidt & S. Frota: Talking to learn: Conversation in second language acquisition (Newbury House, USA 1986) , p.237-326.
- [7] R.Schmidt: The role of consciousness in second language learning, Applied Linguistics, Vol. 11(1990), p. 129-158.
- [8] R.Schmidt Awareness and second language acquisition, Annual Review of Applied Linguistics, Vol. 13(1993): 206-226.
- [9] Schmidt, R: Implicit and explicit learning of languages (Academic Press, UK 1994)
- [10] R. Schmidt: Attention and awareness in foreign language teaching and learning. (University of Hawaii USA 1995) , p. 1-64.
- [11] Y.Y. Shen: Second Language Proficiency and Vocabulary In Writing: A case study in South China Agricultural University (Teaching English in China), Vol. 4(2003), p.75-80.
- [12] J. Liu, E.L. Chen and Z.T. He: Journal of Shi Jia Zhuang Railway Institute (Natural Science), Vol. 22 (2009) No. 4, p.40-42.
- [13] M. Swain: Input in Second Language Acquisition. (Newbury House, USA 1985), p.235-256.
- [14] M.Swain: Principle and Practice in Applied Linguistics: Studies in Honor of H.G.(Oxford University Press, UK 1995), p.125-144.
- [15] L.White: Second Language Acquisition and Universal Grammar.(Cambridge University Press, UK 2003).
- [16] M.C. Dai: On the "Explicit" and "Implicit" Problems of Second Language Acquisition, Foreign Languages and Literatures, Vol. 2 (2005), p.101-111.
- [17] S.F. He: A contrastive Study of English and Chinese Languages (Shanghai Foreign Language Education Press, China 2001).
- [18] S.N.Lian:A contrastive Study of English and Chinese Languages (Higher Education Press, China 2010).