The Benefits of Encouraging Learners to Notice Their Errors

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In 1990 when Schmidt proposed the Noticing Hypothesis which suggests "that input does not become intake unless it is noticed, that is, consciously registered" (2010, p. 1), in a way, he opened a can of worms. The worms were welcomed though by the Second Language Acquisition (SLA) field. After all similar concepts, such as, focal awareness (Atkinson and Shiffriin, 1968; Kihlstrom, 1984), episodic awareness (Allport, 1979), and appreciated input (Gass, 1988) have been around for quite some time. To name a few of the areas of inquiry and theories within the field which were influenced by the proposal of the Noticing Hypothesis, there are the: implicit and explicit learning in SLA and teaching (Hultstijn, 2003, 2005; N. Ellis, 1994, 2005, 2006, 2008; Robinson, 1995a, 1995b, 1996, 2002); Swain's (1995) incorporation of the concepts of noticing and noticing the gap into a sociocultural model of learning; VanPatten's (1996, 2004) proposals for input processing instruction; Long's (1996) revised interaction hypothesis and the focus on form literature; and Gass and Mackey's (2006) model of input, interaction and learning. Also, "most empirical studies have been supportive of the Noticing Hypothesis" (Schmidt, 2010, p. 6) and some of the specific findings from research done on noticing are that: noticing facilitates learning (Schmidt & Frota, 1986; Schmidt, 1990; Ellis, 1994; Swain, 1993, 1995, 1998; Lapkin and Swain, 2001; Izumi & Bigelow, 2000; Izumi, 2002; Mackey, 2000, 2006); task-repetition leads to improvement (Bygate, 1996); noticing activities encourages learners to focus on form (Lynch, 2001; Mennim, 2003) and higher level of awareness and learning has been linked (Leow, 1997, 2000). Although "to many people, the idea that SLA is largely driven by what learners pay attention to and become aware of in target language input seems the essence of common sense" (Schmidt, 2010, p. 1), there has yet to be any known data collected on the general benefits of encouraging learners to notice their errors. Prior to introducing the research that will be presented in this paper, first we must answer the following questions: what exactly does it mean to notice, why focus on errors, and how can it be encouraged?

Bowers (as cited in Schmidt, 1990, p. 132) provides a clear and simple example of what it means to notice:

> When reading…we are normally aware of (notice) the content of what we are reading, rather than the syntactic peculiarities of the writer's style, the style of type in which the text is set, music playing on a radio in the next room, or background noise outside a window. However, we still perceive these competing stimuli and may pay attention to them if we chose.

Therefore, learners, while learning a language, may be aware of or notice the language or parts of the language they are learning and even if the Noticing Hypothesis was not true, that is, learners do not need to notice or consciously register input in order for it to become intake, it has been argued that being more aware of the language being learned is better than less (Baars, 1988) and there is no evidence to support any claims that learners learn less about what they are not aware of (Logan, Taylor & Etherton, 1996). According to Ivor and Carlos (2003), noticing can be explicit, implicit, guided by the teacher and/or self-directed (or "unguided" according to Santos, Lopez-Serrano, and Manchon, 2010). As far as what should be noticed, it has been suggested that it is necessary that the forms learners notice "are based on their own recent learning experience, particularly where that experience is negative" (James, 1998, p. 258) and that "there appears to be a growing consensus among the majority of researchers concerning the significance of the role played by negative evidence" (e.g., Ammar and Spada, 2006; Shaofeng, 2010; Oliver, 2000; Mackey, 2006 cited in Bassiri, 2011, p.2). Researchers have even suggested ways in which learners can be encouraged to notice their own errors, for example, activities, such as, cognitive comparisons (Ellis, 1995), reconstruction tasks (Thornbury, 1997) and learners doing their own error analysis (EA) (James, 1998) have been proposed. Unfortunately, however, in language learning environments "…the type of feedback the teacher offers to the learner does not provide optimal conditions to help learners *notice* their errors…" (Qi and Lapkin, 2001, p. 280). In this paper further advice on how learners can be encouraged to notice their errors will be given. In order to provide support for this advice current research done in this area will be presented.

Current research - participants and context

The research presented in this paper was conducted at a private all women's university in Japan during one 15-week semester. There were 56 participants divided evenly up into a control group (*n* =28) and an experimental group (*n* =28). The participants were students enrolled in the Intensive English program along with 124 other students (enrollment is capped each year at 180). These students are divided into ten different levels from A to J, A being the lowest level and J being the highest. Below is listed the levels of the participants. As can be seen, the control group was levels C and J and the experimental group was levels A and F. The reasoning behind choosing these levels was to ensure that both groups, i.e. the control and experimental groups, were evenly represented as much as possible and intentionally it was decided that one of the experimental groups be one of the lowest

levels opposed to being one of the highest levels. Data was collected in their final third-year Speaking classes and all of the teachers were different except one teacher taught A and J levels. It is important to point out that the materials used were the same in all of the classes regardless of the differences in levels.

- J level - Control
- F level - Experimental
- C level - Control
- A level - Experimental

Research hypotheses

Coming into this research, the researchers, based on experience and the above mentioned research, had certain hypotheses related to the possible benefits of encouraging learners to notice their errors. First, it was believed that learners would perform better on tests. There is no known evidence linking learners' abilities to notice and their performances on tests. It was believed that learners would not only perform better on tests when provided with opportunities to notice their errors but that they would perform better in comparison to the control groups. Second, it was believed that learners would have a better understanding of what was to be learned. In other words, they would be more consciously aware of what they were to be learning in class and in particular, in comparison to the control groups. Third, it was believed that learners would have a better understanding of their own interlanguage, i.e. by being encouraged to notice their errors, they become more aware of their own personal level of the English language (a comparison cannot be made between the groups). Finally, it was believed that the learners would both personally over the semester and in comparison to the control groups become more motivated and more autonomous due to being given opportunities to and encouraged to notice the making of their own errors.

Data collection, analysis and results

When collecting data on noticing, previous researchers have used diaries, questionnaires, and uptake sheets (Schmidt & Frota, 1986; Slimani, 1989; Warden, et. al., 1995)…verbal reports such as think-aloud protocols and stimulated recall protocols (Leow, 1997; Mackey, et. al., 2000; Swain and Lapkin, 2002; Adams, 2003) nevertheless "concerns have…been raised in the SLA literature as to how noticing data should be collected and analyzed..." (Mackey, 2006, p. 409) and it has been suggested that "it may be best to triangulate methods of collecting noticing data to

obtain as full a picture as possible of learners' noticing..." (Mackey, 2006, p. 409). While keeping this in mind, the researchers collected the following data which will be described in detail below along with the results: pre- and post-tests, a motivation, autonomy and noticing questionnaire (due to space limitations and there not being any significant differences between the results for the groups on the questionnaire, this information will not be included), a written mid-term test, a spoken final test and end of class assignments. The differences between the control group and experimental group, were that the experimental group was given opportunities to notice their errors on both the written mid-term test and the spoken final test. For the written test, the students in the experimental group were given thirty minutes in the next class after the test to try to correct errors that had been highlighted by the teachers. This then would be considered to be teacher-guided noticing. They were told that any error they corrected they would receive points for. For the spoken test, the students were told that they needed to listen to their own recordings made during the test and that any errors properly corrected, they would receive points for. They were to e-mail to their teachers the corrections within a week after the test.

Written mid-term test

The mid-term test was implemented halfway through the semester and included questions which related to materials covered during class up until that point. There were eight sections in the test, see below for an example section of the test, and the full score for the test was 45.

Example section of the test:
II. Directions:
Make a list of topics which are taboo, and safe, to talk about when you are first introduced to someone.

Taboo topics	Safe topics
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

The average control group final score on the mid-term was 33 and the average experimental group final score was 36. Therefore, the experimental group received an average of 3 more points than the control group on the mid-term test. Also, the experimental group received an average of 4 noticing points on the test.

Spoken final test

The class before the test was given, students were given various scenarios to practice during class and on their own. They were told that two of the scenarios would be randomly chosen on the day of the test although it was decided that for research purposes only two scenarios chosen by the teachers in conjunction with the researchers would be used. The day of the test, they were to read the scenarios and then act out the scene. The final score for the test was 20. An example scenario for speaker A only is:

> You are a university student at a women's university in Japan. You get an opportunity to go to Philadelphia, Pennsylvania, USA for a semester aboard program. This is your first day at the school orientation in Philadelphia, your professor told you to try to make as many English speaking friends as possible. Start a conversation, continue a conversation, make one polite request and end a conversation.

The average final score for the control group was 17 and the average experimental final score for the experimental group was 18. Therefore, the experimental group got an average of 1 more point than the control group on the final test. Also, they received an average of 3 noticing points on the test.

Table 3. Written mid-term and spoken final test average

	Written Test Average	Written Test Noticing Point Average	Spoken Test Average	Spoken Test Noticing Point Average
Control	33	n/a	17	n/a
Experimental	36	4	18	3

Pre- and post tests

The pre- and post-test consisted of six situations which were situations that students would become familiar with during the semester and each situation was worth ten points so sixty points in total.   An example situation is:

Networking – You are at a conference and your boss has told you that you need to meet people.   A woman is standing by the wall by herself. What do you say?

The students were instructed to read the situations and then write down what they think they would say in each situation.   The pre- and post- tests were assessed by another teacher at the same university (someone other than one of the teachers of the classes) and the following rubric was used:

Table 1. Pre- and post-test rubric

Nothing 0	One sentence 1	Two sentences 2	Three sentences 3
Many grammatical mistakes 0	Some grammatical mistakes 1	A few grammatical mistakes 2	No grammatical mistakes 3
Pragmatically inappropriate 0	Somewhat pragmatically inappropriate 1	Almost completely pragmatically appropriate 2	Pragmatically appropriate 3
Score (+1 if response is considered to be an appropriate response overall): /10			

Below are listed the pre- and post-test average gains of both the control and experimental groups. As can be seen, the average class gain of the experimental group was almost twice that of the control group. In other words, the experimental group showed twice the progress in comparison with the control group as far as understanding what was to be learned.

Table 2. Pre- and post-test average gains for control and experimental groups

	Pre-test Average (%)	Post-test Average (%)	Average Class Gain (%)
Control group	47	58	11
Experimental group	36	55	19

End of class assignments

The final data collected was called End of class assignments. Students were told that completing the following end of class assignment was compulsory in each class:

1. I think the activity/activities in class today was/were: _____.
2. After doing the activity I feel: _____.
3. I think that my English is:_____.

The purpose in collecting this data was to do an i-statement analysis. An i-statement analysis has been shown to be an effective way to collect data on the motivation and autonomy of learners (Ushioda, 2008, 2010). For current research purposes, it was decided to provide the above incomplete statements which the students were told to complete. No examples were given to the students in order not to affect the results. The following is an analysis of approximately two hundred responses given by students in the experimental group after doing the noticing activity after each test (all examples given of responses are the original responses of students and therefore may at times be ungrammatical). It is worth pointing out that these responses were also compared to their other responses made throughout the semester and it was found that these particular statements were limited to being made almost solely after the noticing activities. This adds validity to these responses in relation to the noticing activity. When asked to complete the following statement: I think the activity/activities in class today was/were…, 68% of the responses were positive and were reports of personal gain. Examples of positive responses are: 1) good, 2) very fun and 3) very useful.

Examples of reports of personal gains are: 1) a good opportunity I notice mistakes I made, 2) able to get a correct understanding and 3) It was a good chance to know how much I can communicate in English.   When asked to complete the following statement: After doing the activity I feel…, 78% of the responses were positive, reports of personal gain and reports on ability to self-assess.   Examples of positive responses are: 1) good, 2) my interest rising and 3) I felt relieved.   Examples of reports of personal gains are: 1) I noticed my mistakes, 2) I could find my faults by myself and 3) I could understand what I should say when I want to invite friends so I felt I don't want to make same mistakes again.   Examples of reports on ability to self-assess are: 1) I couldn't talk with my friends well, 2) I have to learn more vocabulary and 3) that to tell my opinion is not easy.   When asked to complete the following statement: I think that my English is…, 60% of the responses were in relation to claiming improvement and were reports on ability to self-assess. Examples of students claiming improvement were: 1) made progress, 2) I think that my English is better than last Tuesday, 3) My English is getting better for sure. Examples of reports on ability to self-assess are: 1) not good about ending conversations, 2) My English need more vocabulary and many paterns and 3) too small voice! and not fluent.

Discussion

Below the hypotheses will be stated again and discussed in relation to the data collected and analyzed.

Encouraging noticing leads to better performance on tests

The first hypothesis stipulated was that the learners who were encouraged to notice their errors would perform better on tests.   As can be seen by the mid-term and final test scores, the experimental group on average scored 1~3 more points than the control group.   Although this may not be considered to be a significant difference, if it is kept in mind, for example, that a part of the experimental group was made up of students from the lowest level and a part of the control group was made up of students from the highest level, and that the same materials were used in all classes, it is quite surprising that the experimental group did do better at all.   What is most important to point out is that these higher scores can be directly related to being given opportunities to notice because if they were not given an opportunity to notice their scores would not have increased.   Another finding which provides further support for this hypothesis is that before receiving the noticing points, the experimental group received lower scores on the test.   If it were not for giving the learners the

opportunities to notice their errors, not only would they have not received more points on the test but they would have received less points than the control group.

Encouraging noticing leads to a better understanding of what is to be learned

The second hypothesis was that learners would have a better understanding of what was to be learned. In other words, it is believed that the learners who are encouraged to notice their errors will be more aware of what is going on in class and as can be seen by the pre- and post- test results, the average class gain of the experimental group was almost twice as much as that of the control group (average was 19% and 11% respectively). Although these results cannot be directly linked to being encouraged to notice, it could be considered to be a major factor since the materials used in the classes were the same, including the tests, and the methods of evaluation were the same as well. If other possible major factors are limited, e.g. differences in teaching methods, then this would provide further support to the above claim and this can be done because the same teacher taught both a part of the control group, the highest level, and a part of the experimental group, the lowest level. Therefore, the difference in teaching methods would not seem to be a major factor in determining differences of any kind.

Encouraging noticing leads to a better understanding of an interlanguage

The third hypothesis is that learners who are encouraged to notice their errors will have a better understanding of their own interlanguage. It has been postulated that the level at which a learner is ready to learn a language is one level above their current level (Krashen, 1985). However, the problems that arise are that it is difficult for teachers to ascertain at which level each student is at and to, at the same time, teach at all the different levels. One way to solve this problem would be to give this power to the students. If the students are encouraged to become aware of the errors that they make and to correct them if possible, then they will begin to first of all, become more aware of the errors that they make and second of all, begin to think of ways of correcting those errors. It can be seen from the current research data that the experimental group received an average of 4 noticing points on the written mid-term test and an average of 3 noticing points on the speaking final test. This means that the students not only did that much better on the test, but that they are now aware of what they are doing incorrectly and how they should correct themselves. Therefore, the students are equipping themselves to advance on their own which will be discussed in more detail in relation to the last hypothesis below. One final finding worth mentioning is that one student received 9 noticing points on one of the tests. Although this is exceptional, it is worth noting that this student, and others as

well, would not have performed better on the tests nor become more aware of an interlanguage if they had not been given the opportunity to notice their errors. In other words, by just giving the students a second chance to look at their tests, they were able to perform better on the tests and to become more aware of the errors they were making.

Encouraging noticing leads to being more motivated and autonomous

The last hypothesis is that learners who are encouraged to notice their errors will become more motivated and autonomous. It was believed that by giving opportunities to the students to correct their errors and to gain more points due to making these corrections that they would feel a sense of achievement which would compel them to take on further responsibility for their own language learning development. As can be seen by the i-statement analysis, approximately 60%~78% of the responses after the noticing activity either were positive, were reports on personal gains, claiming improvement or reports on an ability to self-assess. By giving these opportunities to the students to improve themselves on their own, they were able to realize that this was a positive and beneficial experience for them.

Conclusion

In conclusion the limitations of the research presented in this paper and recommendations for further research will be given. The first limitation of this research was that inter-rater reliability was not achieved because there was only one rater for each of the data. That is, one of the researchers focused on the quantitative data and the other on the qualitative data. In the future, for the pre- and post-tests inter-rater reliability will be sought out. Another possible limitation is that there were few participants in this research, however, if it is kept in mind that both quantitative and qualitative data were collected then this may be acceptable. A final limitation is that the learners were given few opportunities to notice their errors. It would seem that by giving learners more opportunities to notice their errors, they would benefit more. Further research on this is currently being undertaken.

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