

Applying the Comprehension Hypothesis: Some Suggestions

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This paper consists of three parts: (1) A brief review of the Comprehension Hypothesis; (2) How the Comprehension Hypothesis helps settle some seemingly never-ending controversies in the field; and (3) some ideas for application to the English as a foreign language situation.

THE COMPREHENSION HYPOTHESIS

My goal in this paper is to discuss some possible pedagogical applications of the Comprehension Hypothesis, a hypothesis I consider to be the core of current language acquisition theory.

The Comprehension Hypothesis states that we acquire language when we understand messages, when we understand what people tell us and when we understand what we read.

The Comprehension Hypothesis also applies to literacy: Our reading ability, our ability to write in an acceptable writing style, our spelling ability, vocabulary knowledge, and our ability to handle complex syntax is the result of reading.

Until a few years ago, I referred to this hypothesis as the Input Hypothesis, a term I still consider to be acceptable. I have come to prefer "Comprehension Hypothesis," because it more accurately reflects what hypothesis says.

The Comprehension Hypothesis is not new with me. In the field of second language acquisition, James Asher and Harris Winitz discussed the importance of comprehension years before I did. In the field of reading instruction, Kenneth Goodman and Frank Smith hypothesized that "we learn to read by reading," "we learn to read by understanding what is on the page.

The Comprehension Hypothesis is not a wild idea, the result of staying up all night drinking cheap wine. It is, rather, conservative, an effort to make sense of and be consistent with a wide body of academic research.

For a hypothesis to survive, it must be consistent with all the research: there can be no exceptions. I have argued that this has been exactly the case with respect to the Comprehension Hypothesis: It is consistent with research in several different fields and continues to be validated, and potential counterexamples have been easily dealt with (see e.g. Krashen, 2002b).

The Comprehension Hypothesis is closely related to other hypotheses. The Comprehension Hypothesis refers to subconscious acquisition, not conscious learning. The result of providing acquirers with comprehensible input is the emergence of

grammatical structure in a predictable order. A strong affective filter (e.g. high anxiety) will prevent input from reaching those parts of the brain that do language acquisition.

Note that if we ignore the Comprehension Hypothesis, that is, provide students with incomprehensible input, and force early speaking, we will raise students' Affective Filters.

The Monitor Hypothesis is also related. The Monitor Hypothesis claims that there are severe limits to the application of consciously learned grammatical rules – learners need to know the rule (a formidable constraint) learners need to be focused on form or thinking about correction, and they need to have time to apply the rules. The only time all three conditions are met for most people is when they take a grammar test; even so, when we examine the impact of grammar study on grammar test performance, it is very modest (Krashen, 2002b). This confirms that our competence comes from comprehension of messages, not grammar study.

THE VALUE OF GRAMMAR INSTRUCTION

The Comprehension Hypothesis claims that language acquisition does not happen when we learn and practice grammar rules. Language acquisition only happens when we understand messages. This has, of course, been questioned in recent years, as a stream of papers have appeared in the professional journals claiming that grammar instruction is helpful. I am pleased that these studies are being done: What was once an axiom is now a testable hypothesis.

In my reviews of these studies, I have concluded that they confirm the correctness of the Comprehension and Monitor Hypotheses: they show only that even after substantial grammar study, even very motivated students show only modest gains in accuracy, and these gains occur only on measures that encourage a focus on form. Truscott (1998) has arrived at very similar conclusions.

Some have interpreted this position as a claim that all grammar teaching is forbidden. Not so. There are two good reasons for including grammar in the EFL curriculum.

The first is for "language appreciation," otherwise known as "linguistics." Linguistics includes language universals, language change, dialects, etc. The second is to fill gaps left by incomplete acquisition and places in which idiolects differ from the prestige dialect. Society's standards for accuracy, especially in writing, are 100%: We are not allowed "mistakes" in punctuation, spelling or grammar. One public error, in fact, can result in humiliation. Even well-read native speakers have gaps, places where their grammatical competence differs from accepted use.

Consciously learned rules can fill some of these gaps, which are typically in aspects of language that do not affect communication of messages. The place to use this knowledge is in the editing stage of the composing process, when appealing to conscious rules will not interfere with communication.

I recommend delaying the teaching of these rules until more advanced levels. I would first give acquisition a chance, and then use conscious knowledge to fill in some of the gaps. There is no sense teaching rules for Monitoring that will eventually be acquired.

Grammar, thus, is not excluded. It is, however, no longer the star player but has only a supporting role.

CORRECTION

The correction controversy is closely related to the grammar controversy. As I understand it, correction is supposed to help us fine-tune and adjust our consciously learned grammar rules. In his review of the literature, Truscott (1996) has concluded that correction has no effect on grammatical accuracy; in a previous ETA paper, I also reviewed this research and came to similar conclusions – correction only seems to help when students are tested on tests in which the conditions for Monitor use appear to be met, e.g. a grammar test.

Another way of determining whether grammar correction is effective is to look at studies in which students are corrected on their writing and then are asked to rewrite the same paper, taking the corrections into consideration. I have found four studies of this kind. In three studies, Fathman and Whalley (1990), Ashwell (2000), and Chandler (2003), subjects were fairly advanced students of EFL who had had considerable instruction in formal grammar, and who, we can assume, believed in conscious learning. In a fourth, Gascoigne (2004), subjects were first year university students in the US studying French. In these studies, the students had the advantage of having the corrections in front of them and had plenty of time. Because the paper was already written, students did not have to think about meaning at all but could focus on form, and they were graded on their grammatical accuracy. In these cases, correction was given the maximum chance to work; all conditions for the use of the conscious Monitor were met. Even under these optimal conditions, the impact of correction was very modest.

Subjects in Fathman and Whalley (1990) were intermediate ESL college students in the US. Students wrote compositions that described a series of pictures. We examine here two groups that were corrected: One group received correction only, the other correction plus feedback on content. Correction was limited to grammar, and consisted "solely of underlining all grammar errors (e.g. verb forms, tenses, articles, agreement). Thus students were told the location of their errors only and were not given information on the kinds of errors or shown the correct forms" (p. 182). Students wrote their compositions in class (they were given 30 minutes), the corrected versions were returned "a few days later" (p. 182) and students were given 30 minutes to rewrite.

Students wrote approximately the same number of words on each version, about 220 words in the first draft and about 250 words in the correct draft. As seen in table 1, they were able to correct only about half of their errors.

Table 1: Percent of errors corrected: Fathman & Whalley

	Before	after	improvement	% errors corrected
grammar	11	4.2	6.8	62
grammar + content	21.1	11.1	10	47

from: Fathman and Whalley (1990)

Ashwell (2000) compared the effect of correction on form with comments on content to determine if there was an optimal order (which should come first). Here, I focus only on the effect of correction, ignoring whether correction came before or after comments on form. I focus specifically on two of the subconditions. In both, subjects wrote 500 word compositions outside of class, and errors were then corrected, with correctors spending 12 minutes on each paper. The correction was "indirect feedback," that is, "underlining or circling grammatical, lexical, and mechanical errors or ... using cursors to indicate omissions" (p. 233). Students had a full week to return their revised papers. The assignment was part of regular classwork.

In both conditions, students were able to correct only about one third of their errors (table 2).

Table 2: Percent of errors corrected: Ashwell

	% errors before	after	improvement	% corrected
Content, then form	24.1	15.8	8.3	34
Form, then content	21.3	13.6	7.7	36

from: Ashwell (2000)

Students clearly paid attention to the corrections. For all conditions of the study, students acted on 75% of the formal corrections, and 88% of the formal changes they made were in response to the corrections.

One of the conditions in Chandler (2003) also appears to be a case of students' rewriting the same paper after correction. In this study, students were taking advanced ESL classes at a music conservatory in the US, and all "had had quite a bit of training in English grammar" (p. 272). Students had every reason to be careful: Accuracy in writing was a component of their grade in the class. Students had several days to make corrections.

Students wrote about eight pages of text and received four different kinds of feedback. In the "correction" condition ("full correction" in table 3), students were provided with the correct form, in the "underline" condition only the location of errors was indicated, as in the previous two studies. In the "describe" condition, a margin note was written indicating the kind of error made in the line it was made (e.g. "punc"), but the precise location was not given. All abbreviations had previously been explained in class and students received a list of the abbreviations. Finally, in the underline/describe condition, both the kind of error made and its precise location were indicated.

As indicated in table 3, with full correction students were able to correct nearly 90% of their errors. It should be noted, however, that all students had to do was copy the teacher's correction. The other conditions produce results that are quite similar to what we have seen before.

Table 3: Errors per 100 words: Chandler

	before	after	improvement	% corrected
full correction	10.1	1.1	9	89
underline/describe	10.1	3.1	7	69
describe	10.1	4.9	5.2	52
underline only	10.1	4.6	5.5	54

from: Chandler (2003)

In Gascoigne (2004), first semester university students of French were asked to write four compositions. Each essay was connected to a unit and was designed to help students practice those rules presented in the unit. Students were given two days to make corrections, and had access to the textbook during this time. Correction of grammar errors included information about the location of the error and a description of the error, and sometimes the correct form was provided. Gascoigne only gives two examples: "Pay attention to verb endings" and "Don't forget agreement."

Gascoligne concluded that correction had a "profound effect": 88% of corrections were successful, 8% led to an incorrect change, and only 3% were ignored.

Summary of Correction Studies

These studies represent the most optimal conditions for correction to work: All students were university-level and were able to understand grammar. All were motivated to do well, in some cases grades were at stake. All had plenty of time, from 30 minutes to one week to make corrections and all had access to their grammar texts. All they were asked to do was rewrite their own corrected essay. Thus, all conditions for Monitor use were met.

When students are told only where the error is, they can only correct from 1/3 to 1/2 of their errors. They get better when given more information, but even when they are given the actual rule, and need only copy, they still miss 10% of the errors. This is hardly a compelling case for correction.

Ferris (2004) claims that successful editing of one's text in the short term is "likely a necessary, or at least helpful, step on the road to longer term improvement in accuracy" (p. 54). It is considered a given that students' accuracy improves when editing from one draft to the next. The "big question," according to Ferris, is whether correction helps students improve over time. My conclusion is that we have not even provided a positive answer to the "little question," whether correction under optimal conditions works even in the short-term.

THE ROLE OF OUTPUT

The Comprehension Hypothesis claims that we acquire language by input, not by output, a claim is supported by studies showing no increase in acquisition with more output (Krashen, 2002b). Studies show, however, consistent increases in acquisition with more input.

This does not mean that output should be forbidden. Oral output (speaking) invites aural input, via conversation. If you talk, somebody might answer back. The Comprehension Hypothesis predicts, however, that the contribution of conversation to language acquisition is what the other person says to you, not what you say to them.

Comprehensible input-based methods encourage speaking but do not force it. Students are not called on; rather, participation is voluntary.

Written output, in addition to its communicative value, makes a profound contribution to thinking. In short, writing makes you smarter. As we write, as we put our ideas on paper and revise them, we come up with better ideas. When it does not happen, when we have "writing blocks," it is often because we are not using what is called "the composing process," strategies for using writing to come up with new ideas. Strategies included in the composing process are planning (but having flexible plans), being willing to revise, delaying editing, rereading what one has written, and allowing periods of "incubation" for new ideas to emerge (see Krashen, 2002b).

Many EFL classes include the composing process, but it is not clear if this is necessary or will always be necessary. There is some evidence that at least aspects of the composing process transfer across languages (Lee and Krashen, 2002); it may only necessarily to expose students to these ideas in the first language.

OUR GOAL: AUTONOMOUS ACQUIRERS

We don't need return business in the language education profession. Our goal in foreign language pedagogy is to bring students to the point where they are autonomous acquirers, prepared to continue to improve on their own.

In terms of the Comprehension Hypothesis, an "autonomous acquirer" has two characteristics:

- The autonomous acquirer has acquired enough of the second language so that at least some authentic input is comprehensible, enough to ensure progress and the ability to acquire still more language.
- The autonomous acquirer will understand the language acquisition process. The autonomous acquirer will know that progress comes from comprehensible input, not from grammar study and vocabulary lists, and will

understand ways of making input more comprehensible (e.g. getting background information, avoiding obviously incomprehensible input).

An autonomous acquirer is not a perfect speaker of the second language, just good enough to continue to improve without us. This is, of course, the goal of all education – not to produce masters but to allow people to begin work in their profession and to continue to grow.

THE USE OF THE FIRST LANGUAGE

The Comprehension Hypothesis helps us with the issue of whether and how to use the student's first language in foreign language education. The Comprehension Hypothesis predicts that the first language helps when it is used to make input more comprehensible: This happens when we use the first language to provide background information. This could be in the form of short readings or explanations by the teacher before a complex topic is presented. Information provided in the first language can help the same way pictures and relia can help at the beginning level, as context that makes input more comprehensible.

The Comprehension Hypothesis predicts that first language use can hurt when it is used in ways that do not encourage comprehensible input. This happens when we translate and students have no need to attend to the second language input.

Research from the field of bilingual education is consistent with these predictions. In general, bilingual programs have been shown to be quite successful in helping language minority children acquire the majority language. In these programs, literacy is developed in the primary language, which transfers to the second language, and subject matter is taught in the primary language in early stages to provide background knowledge (Krashen, 1996a). One version of bilingual education, however, "concurrent translation," in which teachers present the same message in both languages using sentence-by-sentence translation, has not been shown to be effective (Legarreta, 1979).

The Comprehension Hypothesis thus predicts that a quality education in the primary language is an excellent investment for later second language development.

AGE: WHY OLDER IS FASTER

The Comprehension Hypothesis helps us understand why older children acquire more quickly than younger children, and why, in early stages, adults are faster than children: Older acquirers, thanks to their superior knowledge of the world, understand more of the input they hear and read.

NARROW INPUT

The Comprehension Hypothesis predicts that language acquisition will proceed more rapidly if input is "narrow," that is, if acquirers obtain a great deal of input in a narrow

range of subjects and gradually expand. This contrasts with the usual idea of the "survey" in which students are given a short exposure to a wide variety of topics. The "survey" only ensures incomprehensible input. Staying "narrow" allows the acquirer to take advantage of background knowledge built up through the input.

The idea of narrow input began with narrow reading (Krashen, 1981), the suggestion that language acquirers stick to one author or genre and gradually branch out. It is supported by findings showing that better readers in English as a first language tend to read more series books (Lamme, 1976), as well as reports of progress made by female adult second language acquirers who read extensively from the Sweet Valley High series, a series written for girls (Cho and Krashen, 1995, 1995a, 1995b).

In narrow listening (Krashen, 1996b), acquirers listen to recordings of several speakers talking about the same topic, a topic of interest to the acquirer. Ideally, the acquirer records the tape him/herself, from friends who speak the language. Acquirers then listen to the tape as many times as desired. Repeated listening, interest in the topic, and familiar context help make the input comprehensible. Topics are gradually changed, which allows the acquirer to expand his or her competence comfortably. Narrow listening is a low-tech, inexpensive way to obtain comprehensible input.

Dupuy (1999) reported a clear increase in comprehensibility with repeated hearings of narrow listening tapes for students of French as a foreign language. Students did not record the native speakers themselves but could choose the topics. Intermediate students improved from about half to nearly full comprehensibility after three to four listenings. Rodrigo and Krashen (1996) reported that students of Spanish as a foreign language were enthusiastic about narrow listening: 92% said the activity was very interesting and beneficial. Their subjects reported that selecting their own topics and their own speakers was more effective and interesting than hearing pre-selected tapes in a classroom situation.

SOME SUGGESTIONS FOR APPLICATION

I outline below a possible application of the Comprehension Hypothesis and related hypotheses to the EFL situation.

Orientation

One component of EFL needs to be orientation, a brief explanation of language acquisition theory. As noted earlier, our goal is to develop independent, or autonomous acquirers. Knowing how language is acquired will help ensure that this will occur. It is also important to tell students something about the philosophy underlying our practice because the approach outlined here is radically different from traditional approaches; we need to justify our pedagogy to students and in some cases to their parents.

Orientation can be done in the primary language fairly early in the EFL student's language career and can be covered in more detail at advanced levels in English. S.Y. Lee

(1998) included an introduction to language acquisition in an English course at the university level, with excellent results.

A Program

Instruction begins at around ages 8 to 10, when the child is old enough to take advantage of knowledge gained in the first language and young enough to profit from the advantages of beginning as a child.

The suggestions below take advantage of the L1 to accelerate second language acquisition, and at the same time encourage full development of the first language. This happens in two ways: First, EFL does not dominate the school day – what is proposed is not a full immersion program but is just one subject. There will be plenty of time in school available for study in the primary language, building subject matter knowledge, promoting cognitive development, and developing literacy, including mastering the composing process. Second, use of the first language is built into the EFL program in places where it will be helpful to provide background knowledge.

The program aims to develop autonomous acquirers, those with enough competence to understand at least some authentic input as well as knowledge of language acquisition theory so they know what to do to improve and what to expect.

The focus of the program is literature and culture of the English-speaking world, which today is nearly the entire world. The "English-speaking world" does not include only countries in which English an official language, but includes all "Englishes."

The focus on literature and culture has several advantages. In addition to being educationally justified for its own sake, literature and culture include aspects of history, sociology, psychology, anthropology, and philosophy.

In addition, this focus does not "compete" with subject matter teaching in the first language; in fact, it complements it, creating an opportunity for comparative studies. It also can create lifelong pleasure readers in English, ensuring continuing progress.

The program described below covers elementary school all the way to the university level.

Stage 1: Natural Approach and Graded Readers

Aural comprehensible input will be provided, as is done in Natural Approach (Krashen and Terrell, 1983), Total Physical Response (Asher, 2000), and Total Physical Response Storytelling (Ray and Seely, 1998) methodology. Activities can include games, dance, sports and projects. The best activities are those in which students are completely absorbed, in a sense forgetting that they are using another language (for suggestions, see Brown and Palmer, 1988).

Stage 1 also includes reading: At this level, students read very easy texts, such as graded readers, language experience texts (story dictated by student to teacher, teacher writes out story), and newspapers written for EFL students. The only criterion for texts is that they be compelling. They need not provide cultural information or "make you a better person." Some reading can be done as sustained silent reading, as students become independent readers.

Level 2: Light Reading

The focus of level 2 is "light" authentic reading, that is, comics, graphic novels, and easy sections of the newspapers, with continuing reading of graded readers and books specially adapted for second language acquirers.

Class discussion includes the cultural background of some assigned readings as well as readings done in small groups (literature circles). Background readings are provided in the first language when appropriate, e.g. comparison to similar genres in the first language. Class also includes teachers reading to the class from level 2 reading material as a means of providing additional comprehensible input and stimulating interest in books.

Sustained silent reading (SSR) is provided, about ten minutes per day. Students can read anything in English they like (within reason), including graded readers and other reading material from level 1. They are not "accountable" for what they read during SSR.

Some orientation can be done at this level, in the students' first language. This will consist of a brief introduction to language acquisition theory or "how language is acquired," illustrated by case histories of successful and unsuccessful second language acquisition.

The formal study of grammar can begin here, with a focus on aspects of grammar that are useful for editing. Instruction will also include the use of a grammar handbook and the spellcheck function of the computer.

Level 3: Popular Literature

Reading at level 3 focuses on contemporary and light popular literature, including some current best sellers, popular magazines, and viewing of "lighter" films. Class discussion focuses on current culture and how values are expressed in current popular literature, e.g. gender roles, humor, how films and novels comment on issues of the day, the role of "gossip" magazines and newspapers, etc.

SSR continues, again allowing students to select their own reading, which can include reading at "lower levels."

Grammar study at this level can expand to include some "linguistics," i.e. language universals and language change.

I predict that many students will be "autonomous" by this time, able to understand a considerable amount of input outside the classroom. Additional study of English after this level could be made optional, and/or move in other directions, that is, more specific to different professions and interests.

Level 4: Contemporary Serious Literature.

This level includes the heavier and more "serious" works of current interest published in English, as well as films, newspapers, and literary and philosophical magazines. The approach will at first be "narrow," focusing on the work of one author or genre, e.g. the works of Kurt Vonnegut, plays by Neil Simon. As before, SSR can include lighter reading. Only after students have experienced several authors or genres in depth will the "survey" be done.

This level, and the next, can be repeated several times, focusing on different authors and genres.

At this stage, language acquisition theory can be done in some detail, reading original works in English.

Level 5: The Classics

Students are now ready for "the classics," literature written in very different eras. To help ensure comprehensibility, the approach will be "narrow," with a focus on one author or one genre, eg the romance, the historical novel of a certain period (eg World War I, the Depression). Background readings in English and in the first language will also help increase comprehensibility. As before, the "survey" will only be done after students have experienced several authors or genres in depth.

Level 6: Comparative Literature

Comparative literature emphasizes universals: universal themes, universal plots, universal characters, universals of morality and ethics.

A Necessary Condition

Such a program will work, of course, only if a large supply of interesting reading is available, a super-library filled with books, comics, magazines, films and tapes. This is not an impossible dream. In fact, it would cost a lot less than we currently invest in computers, computers of dubious value and that become obsolete within a year or two.

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