This paper discusses the problem of how to deal effectively with students' errors from the perspective of Error Analysis. Basic aspects of the theory such as "interlanguage," "learning strategies" and "the interpretation of errors" are introduced; and empirical data from child language learning studies are presented to support the underlying assumptions that a language learner creates a tentative system of rules from the language data he is exposed to and that this system enables him to use the language. Because of the parallels between second language learning and first language acquisition, it is considered reasonable to extend these assumptions to adult second language learning. In light of this theory, errors are shown to be signs of learning rather than signs of failure. It is proposed that this calls for a switch in focus from the second language itself, to the learner of the second language. This implies that the teacher's role would be in studying the students' interlanguages and facilitating their development rather than in correcting their errors. The implications and some practical applications of this idea are discussed. (Author)
ERROR ANALYSIS:
WHAT THE TEACHERS CAN DO.

Frances Gorbet
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ABSTRACT

This paper discusses the problem of how to deal effectively with students' errors from the perspective of Error Analysis. Basic aspects of the theory such as 'interlanguage', 'learning strategies' and 'the interpretation of errors' are introduced; and empirical data from child language learning studies are presented to support the underlying assumptions that a language learner creates a tentative system of rules from the language data he is exposed to and that this system enables him to use it. Because of the parallels between second language learning and first language acquisition, it is considered reasonable to extend these assumptions to adult second language learning.

In light of this theory, errors are shown to be signs of learning rather than signs of failure. It is proposed that this calls for a switch in focus from the second language itself, to the learner of the second language. This implies that the teacher's role would be in studying the students' interlanguages and facilitating their development rather than in correcting their errors. The implications and some practical applications of this idea are discussed.
What is Error Analysis?

The term 'Error Analysis' implies that the focus of the study is on students' errors. But this is misleading. Although analysing errors is certainly involved in an Error Analysis, much more is implied. Essentially it is a theory developed to explain the learning processes involved in acquiring a second language and in this sense it is first and foremost a language learning theory. The assumption underlying the theory is that errors are evidence of a learner's language system, which is not the system of the target language, but a system of some 'other' language. And the theoretical objective of Error Analysis is to describe the 'other' language. The orientation of the study is psycholinguistic, in that the fundamental question influencing its development has been the cognitive processes involved in learning a second language.
Recently, many linguists and psychologists have felt that we can learn a lot about the nature of language learning by observing and studying the way children acquire language. And no wonder, when we think of the complexity involved in a language it is really quite amazing that almost all children manage to become very fluent in at least one language and sometimes more, by the time they are four years old. "No two children are exposed to the same primary linguistic data, or the same amount of such data, and yet despite such different experience and wide differences in intelligence almost all children are able to crack the code of the linguistic system of their culture and learn to understand and produce sentences". Children also seem to pick up second languages better than we do. Considering these facts, psycholinguists and applied linguists such as Corder, Selinker, and Richards who were studying second language acquisition turned to first language acquisition studies for initial clues about the cognitive processes involved in language learning.

Studies in child language acquisition proceed by looking at children's speech, comparing it with native adult speech and trying to describe and account for the differences. Such studies have
yielded surprising results for those who thought language acquisition was an imitative habit-forming activity. In the psycholinguistic literature put out in the last decade, psychologists and linguists both agree that child language acquisition is an active and creative process. It is active in the sense that the child does not simply receive data - rather, he processes it; and it is creative in the sense that the child, on the basis of his grammar and his knowledge of the world, is able to form statements which he has never heard. All children seem to have an innate capacity to acquire language which requires at least that they be able to:

1) extract and formulate grammatical rules from the mass of language data to which they are exposed, 
2) try out these rules, and
3) revise them in successively closer approximations to the rules of the adults' grammar.

There is evidence that children follow more or less set stages of language acquisition and that each stage has its own grammar which the child must follow. And there is even some evidence to suggest that the order of these stages is invariant across different languages. For example, at a very early stage, 10 months or so, all children speak one word at a time which the mother clarifies by expanding. By the time they are two they are speaking in two or three word sentences, and the development from this stage is very rapid. In her book called, Sentences Children Use, Paula Menyuk studied the language
acquisition of children from two to nine years old. She reports
the patterns of a twenty month old boy who was observed for
one and a half hours.

For example: His mother said: *Let's take your shoes off.*

The boy said: *Shoe off.*

His mother said: *Oh, your shoe fell.*

The boy said: *Shoe fall.*

Manyuk emphasizes that even though the child's utterances
follow the mother's, they are not imitative. "These utterances
seem to be reformulations of the sentence in terms of the
child's grammatical structures". She also states, "There
were many repetitions of the same utterance during this period
which then led to overt testing of various combinations such
as 'Mommy chair', 'Ronnie chair', and 'Judy chair'. She
explains that "this practice with language has been observed
with other children and seems to be the first indication of
hypothesis testing in language acquisition". Ursula Bellugi,
in her studies of child language acquisition, found that all three
or four-year-olds learning English seem to use questions like
this: 'What he can ride in?'; 'Where I should put it?'; 'Why he
is doing it?'. Richards points out that it is clear from
instances like these that children are not simply imitating
the speech of their parents, as sentences like these do not
appear in adult speech.
Not only does the evidence show that the child does not always imitate adult speech, it also shows that he cannot imitate structures he cannot produce. Corder reports an amusing example of this:

C: Nobody don't like me.
M: No, say, nobody likes me.
C: Nobody don't like me.

(Eight repetitions of this dialogue)
M: Now listen carefully. Say: Nobody likes me.
C: Oh, nobody don't likes me.

Although imitation does occur in language acquisition, Corder emphasizes that the child himself selects the items to be imitated. He points out that the evidence strongly suggests that "where imitation apparently occurs, it fills some other function than learning" (p. 112).

It has also been observed that children create new forms to conform to their grammar as they require them. They constantly hear the pronouns 'yourself', 'myself', 'herself', 'himself', and yet almost every child at some point uses the pronoun 'hisself'. In this instance the children are actually improving on the regularity of English.

The results of Jean Berko-Gleason's work, at Boston University, give a vivid example of the creative aspects of the child's learning
processes. In this experiment children were required to apply the rules of their grammar to nonsense fillers in a test she used, called the "wug test". For example, she showed children (about 3 years old) pictures of a boy and told them, "Johnny bods every day, he did it yesterday, too!" The children were then required to complete the sentence, "Yesterday, Johnny bodded". Or, the children were shown a picture of an object and told -- this is a gutch. Here is another gutch. "Now there are two gutches". Her evidence shows that they were able to do this successfully.

On the basis of these early language studies, it is concluded that child language acquisition is not merely an imitative process but a creative and active process based on the language data to which learners are exposed. Hence, it is now the aim of studies dealing with child language learning "to describe the different stages through which the child progresses towards adult competence with each stage having a grammatical system of its own that does not need to be explained by reference to the adult system. The child is believed to make a series of hypotheses about the structure of the language, which he tests and abandons or preserves. Each successive hypothesis is an interim grammar accounting more successfully for the data he is exposed to. The last hypothesis is the final adult grammar of competence in the language." The child's competence at a given age is regarded as 'a self contained internally consistent system not dependent on the full adult system'.

Three elements have been identified as crucially involved in formulating and shaping the child's grammatical system;

1. Those strategies employed by the child as he teaches himself his mother tongue, for example, initially reducing all sentences to two or three words;

2. The development of his other faculties such as intelligence, cognition, perception and so on, and

3. The structure rules of the particular language he is acquiring. (such as the rule which allows the form 'hisself' or the rules which enable him to manipulate nonsense fillers). 19

There are important and obvious differences between child language acquisition and adult second-language learning. The adult has already developed his cognitive faculties. Hence, whatever role simultaneous cognitive development plays in the child's language acquisition cannot be assumed for the adult. Also, since the adult has already acquired his native language we can expect this knowledge to affect his learning of the second language. 20 Moreover, it is reasonable to suppose that his motivation for learning the second language is different from the child's motivation to learn his first language. 21

In noting such differences between first and second language learning there is always a danger of overlooking similarities Corder points out that 'learning a second language, after we have acquired verbal behaviour (in its mother tongue manifestation)
is a matter of adaptation or extension of existing skills and knowledge rather than the relearning of a completely new set of skills from scratch. However, he emphasises that 'we can conclude from this not that the process of acquiring language and learning a second language must be different, but rather that there are some fundamental properties which all languages have in common (linguistic universals) and that it is only their outward and perhaps relatively superficial characteristics that differ; and that when these fundamental properties have once been learned (through their mother tongue manifestation) the learning of a second manifestation of language (the second language) is a relatively smaller task.'

Despite the differences that do exist, it is reasonable to suppose that at least the processes involved in dealing with the data are similar in each case, and in fact this is the hypothesis on which research in error analysis proceeds. It is suggested that habit formation plays a relatively reduced role in both first and second language learning. And, in fact, recent research on child second language learning has borne this hypothesis out. Dulay and Burt conclude their study with these words: "In summary, overwhelming research evidence drawn from the actual speech of children learning English as a second language shows that children do not use their 'first language habits' in the process of learning the syntax of their new language. If the principles of habit formation do not predict the difficulties i.e. the errors children make can it explain how they do acquire language structure? There
seems to be little reason to assume so. On the other hand, the account of language acquisition offered by L-1 research has proved to be a most productive predictor of children's errors in L-2 acquisition."  

In this respect it is significant that many of the errors that second language learners make, regardless of their mother tongue, are similar to the errors children make, whether they are learning English as a second language or acquiring it as their first language. For example, in English both children and second language learners say:

*He did not agreed or he did not found*

Redundancy reduction is also common -- eg. *Yesterday, I go to the store*. And, there is evidence that the second language learner, like the child formulates rules in order to cope with the language he is learning to understand and speak. This results in errors common to both such as overgeneralization due to analogy, eg. 'he goed' based on analogy with eg. 'he looked', or 'bring, brang, brung' based on analogy with 'sing, sang, sung'.

In this sense adult second language learning, like child language acquisition is considered to be both systematic and creative.
How does error analysis proceed?

Just as child language acquisition studies concentrate on observing describing and accounting for the differences between the way children and adults speak, so Error Analysis concentrates on the differences between the way second-language learners and native speakers speak. Just as linguists strive to describe children's speech both in its own terms as well as relative to adult speech, so Error Analysis researchers aim at describing adult second language speech in its own terms as well as describing it relative to native speech.

Error Analysis proceeds from the psychologists' 'black-box' model. The 'black box' (unknown) represents the processes involved in learning the second language.

Working from this model and the assumption that in order to learn a language a person creates a system of rules from the language data he is exposed to, and that this system enables him to use it, Error Analysis theorists have explained the language learning process as follows:
The learner is faced with a mass of second language data (input). He extracts information from this data (intake) and uses this information to formulate rules or hypotheses about the data (processing). He then tests these hypotheses (output) and consolidates them or revises them according to the results of these tests (feedback). This feedback is supplied by 1) the reaction of listeners to the errors in the learner's output and 2) the learner's own personal satisfaction or dissatisfaction with what he has said. (That is, did he say all he wanted to say, and was what he said understood, and expressed the way he intended it to be?)

It is the task of Error Analysis to describe the learning mechanism (processing) by examining the learner's output. Because we are assuming that the learning process is systematic, we must look at the learner's total output as a system. That is, the learner develops his own version of the target language, and his version is a language itself.

Selinker, a pioneer in the field of Error Analysis, introduced and defined the concept of 'interlanguage' to describe the learner's output. He wrote that an interlanguage may be linguistically described, using as data the observable output resulting from a speaker's attempts to produce a foreign norm, i.e., both his errors and his non-errors. It is assumed that such behaviour (output) is highly structured. Hence, it must be dealt with as a system, not as a collection of isolated errors. This is
a fundamental and crucial point. Error Analysis is not the study of the learners' errors (as the name implies). Rather it is the study of the learners' output or interlanguage at any given moment.

Pit Corder\textsuperscript{28} another major contributor to the field, described the same phenomenon, calling it the learner's transitional competence, while Nemser\textsuperscript{29} speaks of approximative systems, thus describing the learner's second language output as an evolving system or set of systems approximating the language system(s) of a native speaker.

Whether we think of the learner's output as an interlanguage, evidence of transitional competence or an approximative system is not too important. What is important is that the output is 'systematic' and, in this sense, is a language in itself. What makes it different from any other language is that it is constantly and often rapidly changing, and it is developmentally idiosyncratic in the sense that it is not shared by a community of speakers\textsuperscript{30} The data for Error Analysis then, is Interlanguage data. From his interlanguage samples, the researcher must first infer the rules or hypothesis underlying the production of the language sample he is studying. These rules may be related to the target language rules and may also, in many cases, be derived in part from the speaker's...
native language. Thus, there will be rules that are unique to the learners' interlanguage.

For example, in the following samples taken from Richards, students omitted the inversion in the English question form. They produced examples like:

- When she will be fifteen?
- Why this man is cold?
- Why streets are as bright as day?

In interpreting this data, the researcher's task is to identify the rule(s) underlying the production of these kinds of questions. He might infer, for example, that the student's rule is: to form a question using a 'wh' word, add the question word to the beginning of the statement and an interrogative marker (question mark or rising intonation) to the end. (This rule does not govern English or French syntax.) Once the researcher has inferred such interlanguage rules, he can compare them with the rules of the target language to see where and how they differ. (In this case, the native speaker's rules of inversion for when and why is omitted.) From his analysis of the data, the researcher postulates the learner's strategy. Here, it might be overgeneralization of the declarative word order in the formation of 'wh-' interrogatives. But this is just a very simplified example that we have all experienced and reacted to intuitively in the classroom. What is important is that the learner's rules are not explicit in the sense of
traditional 'grammar rules'. Rather they are the underlying principles which permit the speaker to produce the language form he is using. He is not always conscious of them as rules in that he does not 'obey them' in the way we 'obey' the rules of the road or chess rules. Hence it requires skill and special study on the part of the researcher to state them explicitly. Nevertheless these theoretical rules are the principles which guide speech behaviour and in this sense form the logic of the ability to speak and understand language. In the example above, the rules I have stated to explain the data give one of several possible interpretations. The actual rules underlying the production of these questions (i.e. the authoritative interpretation) could be quite different. Identification of learning strategies is the first step in understanding how the learning mechanism which process the intake data works. But, because it involves inferring such non-explicit unconscious rules or principles, it is also the most difficult step and poses real problems for the researcher in interpreting the data.

I do not intend to discuss the theoretical and practical problems involved in analysing interlanguage data. However, I would like to present very briefly a model for classifying data and identifying strategies. This model is a combination of the categories used by Richards, Selinker, Corder, George, Kellerman and Varadi. It is only an outline of how error
analysis proceeds and does not take any of the difficulties in classifying errors and postulating strategies into account.

How are the learning strategies identified? We know that all languages can be described both syntactically and semantically; the learner's interlanguage is no exception. Some strategies will account then, for the nature of the grammar the learner seems to be formulating. These are 'linguistic strategies'. Other strategies must be hypothesized to account for the semantic content of the learner's language development. These are 'communication' strategies. The researcher infers strategies from his observation of the learners output. Errors provide the clues for postulating these strategies and are classified according to types. Some errors are the result of interference, and are called 'interference' errors. This may be interference from the mother tongue. For example, common errors occur amongst Francophones learning English such as 'me, I go....' or 'the boy, he went....'. There is also a possibility of interference from the target language Eg. 'he goed', or 'bring, brang, brung'. The strategy which results in interference errors is analogy. In the first example, the analogy is with specific French structures and in the second instance the student is drawing an analogy with items already learned in the target language (he looked; and, ring, rang, rung).
In reorganizing the input, formulating hypotheses and testing rules, learners tend to overgeneralize. This produces errors of 'overgeneralization' which are characterized by incomplete application of rules, (sometimes he gets it right, sometimes he doesn't); failure to learn the conditions for the application of rules, (he knows the rules but not the exceptions); or false concepts hypothesized (his intuitions about the language are wrong).

Simplification is another classification of errors. The strategy that leads learners to simplify the language is 'redundancy reduction'. It results in errors of the form, 'Yesterday, I go downtown'. Here, it seems that since the past tense is indicated in the modifier 'yesterday', the learner considers it redundant or unnecessary to mark the tense in the verb as well.

Finally, it is clear that memory plays some part in the processing and storage of intake data. But exactly what role memory plays in the learning process is still quite a mystery. Random errors such as slips of the tongue or occasional lapses are classified as performance errors and supply the initial clues for a preliminary understanding of this aspect of the learning process.
As I have already indicated these categories are not clear-cut and there are often difficult and complex interpretation tasks involved in classifying a particular error in one category or another. Those linguistic strategies and the errors resulting from them, which I have discussed, are summarized in Table I. But I cannot over-emphasize that this can only be considered a preliminary and incomplete model for interpreting interlanguage data, -- one that is helpful in understanding the complexities involved, even though its application is limited.

Tamas Varadi observes that simply looking at the form of a language learner's utterances cannot yield sufficient information as to the learner's mastery of the target language. He points out that the learner is aware of his gap in the target language and consciously tries to compensate for his deficiencies. In doing this he employs what Varadi calls communication strategies. These are divided into two groups -- strategies of message abandonment and strategies of message adjustment. Both strategies are the result of the learner realizing that he cannot say what he wants to say in the target language. (see Table II)

The extreme of message abandonment is silence. Because the learner feels he cannot express his idea he does not try.
Bolder learners adopt a strategy of formal replacement. Knowing they cannot say what they want to say they say something else which they know is not 'correct' but which they feel expresses the idea(s). This strategy results in the following types of errors:

1. **WORD COINAGE:** the learner, unable to find the proper target language form to express his meaning, creates his own form. For example, balloon becomes 'air ball', 'gas ball' or 'air ring'.

2. **CIRCUMLOCUTION:** the learner, unable to find the proper target language word to express his meaning, uses phrases which are not necessarily incorrect in themselves, but which would not be used by a native speaker for that purpose and hence are inappropriate. Eg.: balloon becomes 'special toy for children'.

3. The learner uses a description in lieu of the correct word or phrase (this might properly be considered an instance of circumlocution). Eg.: balloon becomes '..they were filled by gas', or 'bowls which are very light and are flying'.

A further result of the gap in the learner's interlanguage is message adjustment. This strategy is characterized by generalization and/or approximation, resulting in subsequent loss of detail and subtlety.
Eg: generalization: 'dash off' becomes 'go'
      'notice' becomes 'see'

Eg: approximation: 'clothes line' becomes 'rope'
      'kitten' becomes 'cat'.

From a strictly syntactic perspective the student who
produces the well-formed statement 'The cat went' has not
made an error. However, if he intended to say, 'The kitten
dashed off' he has failed to communicate his intended meaning
in all its richness and subtlety. In this sense even though
his statement is grammatically correct it is incorrect from
the point of view of communication. Here it must be re-emphasized
that error analysis deals with the learners' output -- both
his correct and incorrect utterances. In this spirit Varadi
defined perfect communication in second language speakers as
follows:
1. Learner is not forced to adjust his meaning (i.e. he is
   able to express his intended meaning).
2. His selected interlanguage form does not differ from a
   proper native speaker form conveying the same meaning
   (i.e. not only does he manage to communicate what he wants
   to say, he also manages to say it in a manner that is
   appropriate.)
3. He manages to produce the utterance without any performance
distortion (i.e. his statements are well-formed).
It follows that not only must the learner say what he means to say, he must say it correctly and in a form that is appropriate.

The immediate and obvious implications of this for teaching are considerable. If we concentrate exclusively on our students' overt grammatical errors we are ignoring a large and important chunk of their learning experience.

In the remaining time I would like to consider other implications of this research for teaching and discuss what we as teachers can do about it.

Error Analysis: What the teacher can do.

It is hoped that just as it is now reasonable to posit universals in child language acquisition, such universals will be found in second language learning through a longitudinal and detailed study of interlanguages. Too few studies of this nature have been undertaken. The hypotheses of Error Analysis are compelling, but there has been very little research done to test them. Whatever research has been attempted has been done mostly with children learning a second language in a natural environment. Only minimal studies have been undertaken with adults in a formal learning situation. Before we
can suggest, with any authority, what teachers can do, much more research must be done. However, Chomsky warns us against relying too heavily on authority and points out that 'it is the language teacher himself who must validate or refute any specific proposal'. He writes that: "In general the willingness to rely on 'experts' is a frightening aspect of contemporary political and social life. Teachers in particular, have a responsibility to make sure that ideas and proposals are evaluated on their merits, and not passively accepted on grounds of authority, real or presumed. The field of language teaching is no exception. It is possible, even likely, that principles of linguistics and psychology and research in these disciplines may supply useful insights to the language teacher. But this must be demonstrated and cannot be presumed. It is the language teacher himself who must validate or refute any specific proposal." The proposal Error Analysis puts to us is that many errors are not signs of failure but of learning itself and thus advances in second language teaching must come from a switch in focus from the second language to the L-2 learner. We must notice particularly how he deals with the target language, --his second language learning strategies and his tentative grammar as reflected in his own errors. With this in mind, imagine for a moment that Error Analysis research has reached a very advanced stage and that all the hypotheses I have been discussing are supported by evidence; the implications of the theory for teaching would be considerable.
In this idealized situation, because we would know the sequence in which second language learners acquire their second language, courses could be developed which correspond to this sequence and therefore, could make the learner's task much easier. Also, because we would know the stages of interlanguage and could describe these stages, the teacher, with full confidence, could view errors as indicators of progression through these stages and could learn a great deal about his students' progress from the errors they are making. Errors would no longer be cause for alarm but would be viewed and evaluated in themselves. Remedial work would no longer be based on the norms of the target language but on the norms of the student's own developmental system. The teacher's attention could be directed towards helping the student progress easily and naturally through the stages of his interlanguage, rather than imposing the norms of the target language on the student from the outset. But this is the idealized state of language learning and language teaching and it cannot be realized until much more research has been done. But let us take Chomsky's warning to heart. Although we are not yet in a position to validate or refute the proposals of Error Analysis, as teachers we an in an ideal position to carry out our own studies and experiments, in our classrooms.

In seeking practical applications of the theory consider the problem we all face: what to do about errors. When
should we correct them? How should we correct them? and Which one should we correct? All too often, a crucial aspect of this problem is not sufficiently considered: i.e., Should we correct them at all? and if so, Why? This question is fundamental because our answer to it reflects our attitudes and sometimes our whole approach to the errors our students make. One school of thought about errors has been '...that if we were to achieve a perfect teaching method the errors would never be committed in the first place and therefore that the occurrence of errors is merely a sign of the present inadequacies of our teaching techniques.' The teacher who subscribes to this view cannot appreciate that as a learning device errors are indispensible to the student in formulating and modifying his interlanguage hypotheses. On the other hand the teacher who views errors as evidence of systematic learning will see the futility of dealing with isolated, random errors. In deciding how to deal with errors, he will be aware of the importance of first understanding what causes them. In this way, he will be more selective and effective in his corrections.

Generally, we all want our students to produce error-free speech. Depending on how badly we want this, we are sometimes unwittingly willing to sacrifice other important aspects of the language learning processes. For example, we are too often guilty of praising a student for a well-formed sentence which expresses next to nothing while at the same time correcting a
student for a complicated grammatical mess that may express a difficult, abstract idea. However extreme we are about it, we all tend to some extent in our teaching to emphasize grammar and take the content for granted. It is fascinating to observe that in the natural language acquisition situation this trend is reversed. We do not consider children to make errors and we pay little attention to the grammatical errors they do make. On the other hand, semantic errors or 'points of fact' are almost always corrected. When Mathew, eighteen months, says 'Mommy chair', we are delighted that he is able to express this concept, and we say such things as 'very good,' 'that's right', 'this is mommy's chair'. As for the formation of his sentence, we do not consider it an ill-formed sentence. It is 'baby talk'; his interlanguage as it were. This attitude persists throughout the child's language learning experience at least until he goes to school. When parents do correct children's utterances, it is not the grammar they generally correct, it is the content. 'No, that's Robbie's chair, not mommy's chair'. Sometimes deliberate attempts to correct children do occur, although they are relatively rare. However, as we have seen, they do not by any means always have the intended results. (See example: 'Nobody likes me',.) The emphasis on child language development is decidedly on content rather than grammar. Everyone just knows the grammar will come. This is not to say that parents always ignore bad grammar in pre-school children, (although they usually do). When the grammar interferes with communication
the pattern that has been observed is that the mother usually elaborates on the child's grammar in an indirect and unobtrusive way. Consider the following example: 48

M---Did Billy have his eggs cut up for him at breakfast?
C---Yes, I showed him.
M---You what?
C---I showed him.
M---You showed him?
C---I seed him.
M---Ah, you saw him.
C---Yes, I saw him.

In this case the correct grammatical form is elicited from the child even though the emphasis is still on communication rather than grammar. The mother's questions aid the child in reformulating his rule for the use of the past tense of 'to see'. He is led through an inductive process to recognize and correct his own errors without ever being overtly told that we don't say 'showed' we say 'saw'. At the same time, more emphasis is placed on meaningful communication than on grammar.

When the message is clear we often ignore children's grammatical errors completely. For example, this is a conversation I overheard at the beach this summer:

1st child age 4 years: "Look at the sand castle I builded"
Adult: "It's beautiful."

2nd child age 3 years: "The water swepted mine away."
Adult: "That's too bad, but I bet it was very special."
We seem to react intuitively to this type of error as a natural developmental phenomenon that will correct itself. Shouldn't we at least consider adapting a similar attitude to some of the errors made by our adult students in the classroom?

Communication must not be sacrificed to good grammar. It is common sense that a strong desire to communicate in a second language creates strong motivation to learn that language, and it is only through using language as a communicative tool that learners will learn more about the resources and limits of the target language. The fact that we rarely evaluate student speech as appropriate or inappropriate for content, suggests perhaps that we should re-evaluate our own attitudes on this point.

In this respect, probably one of the most valuable things the teacher can do is to make himself aware of when and how he actually does correct errors. We can video-tape or even record a series of lessons and study our own strategies of correction. What do we correct? How do we correct it? When do we correct it? and What are the effects of our corrections? A correction that does not produce the desired results may in fact produce undesired results (such as inhibition), and as teachers we must be keenly aware of this possibility.

We automatically tend to think of 'errors' when we think of correction and here it is crucial to be aware of our
learners' communication strategies. As we have seen, it is not uncommon for students to adjust, or even abandon what they want to say in an effort to say it correctly, or to the teacher's satisfaction. The end product may then be correct in the grammatical sense, but it is inadequate from the viewpoint of communication. It is so important that our students learn to say what they want to say as well as what we want them to say.

I am not suggesting that we can simply ignore grammatical errors for the sake of communication. But we must reconsider the significance we place on students errors. It is sometimes more important to tolerate errors than to correct them. Determining when to and when not to ignore student errors is perhaps the most difficult challenge of teaching. What cannot be emphasized too much is that teacher cannot and should not correct every error. The ability to recognize and respond to significant errors effectively, requires that the teacher be completely familiar with his student's learning or 'interlanguage' patterns. He can only do this by studying the student's output carefully before he attempts to correct it.

Corder suggests that all second language learners go through three stages in acquiring the target language: a
pre-systematic stage, a systematic stage and a post-systematic stage. He might be pre-systematic in one sub-system, systematic in another and post-systematic in yet another one. In the pre-systematic stage, the learner does not realize that there is a system in the target language or what its function is. His output is completely random. In the systematic stage, the learner is formulating his hypotheses. He cannot correct his errors as they are still largely random, although he can explain what he means and learning is active. In the post-systematic stage, he is able to correct his errors and there is evidence that he is systematically applying rules. In the systematic stage the teacher can create a non-threatening atmosphere which will encourage the student to form his hypotheses and he can help the student in the post-systematic stage in adjusting the hypotheses already formed.

As Corder points out, some errors are normal to the learning process and in this sense they are developmental. Others are caused by faulty materials, faulty teaching or faulty learning. The sensitive teacher can, through careful study and observation, become skillful in distinguishing these. But we cannot deal with errors effectively until we first attempt to discover what causes them. Some errors are more significant than others, thus the teacher must be selective and systematic about the errors he corrects. Just as it is useless to look at errors as isolated occurrences, so isolated and random
corrections are not very helpful. To be effective remedial work ought to be deliberate and well-planned on the part of the teacher. We must also be careful about how we correct errors. Those of us who have used the drill as a remedial tool have had disappointing, if not disastrous results. Teacher after teacher has complained, 'Drill them and they have it perfectly. Then as soon as the drill is over they turn around and make the same mistake.' Well, no wonder. Our experience screams that the drill cannot be used effectively for remedial work, and Error Analysis offers the explanation for its failure. It does not foster communication, and it does nothing to aid the student in adjusting his hypotheses. Corder warns against using the drill at the wrong time. He calls 'repeating a correct (well-formed) utterance without having mastered the systems which would generate that utterance in a native speaker, language-like behaviour.' In a remedial situation the drill can only produce 'language-like behaviour'. George emphasizes the 'spoon feeding' aspect of the drill. He writes that 'when opportunity for learning is provided, one has to see that the opportunity is such as to make the learner expend effort. It is not so much repetition which results in learning as repetition of effort.' This is not to say, however, that we should throw the drill away. The drill is the most effective tool we have in facilitating quick automatic responses.
And a certain amount of drilling may be an absolutely necessary part of the process of formulating hypotheses about the target language. However, it is a tool for strengthening and building correct responses, not for eliminating errors.

If we are to treat errors effectively the student's part in the correction should be active. Directly supplying the correct form will probably not be very helpful. The teacher who hints at the correct form or supplies it indirectly (as parents often do) should have much better results, especially if he is able to relate his correction to the learner's strategy. However it is done, the student must be put in the position where he can make inferences, formulate concepts and alter his hypotheses and he must be given the time and encouragement to do this.

In some cases it may even be helpful to explicitly formulate the rule that the student is having problems with, especially if he seems to have undue difficulty formulating it himself. Also Corder points out that 'a concept is achieved partly through the illustration of what is not an example of the concept; that is, through negative instances. As teachers we may be able to aid our students considerably by presenting the constraints of a rule as well as instances of its proper application. Along the same lines, we can avoid closely related items that are confusing to the student in his formation of concepts.
Whatever approach we take, we should keep in mind that our task is to aid the student in formulating his concepts about the language, not to supply him with isolated linguistic items.

In summary:

1. First and foremost, as teachers, we should revise our attitudes to the errors our students make. We learn from our errors, and this implies that learning ceases when we no longer make errors. We can help our students considerably by switching our attention from eliminating their errors to learning from their errors.

2. We should become fully aware of the correction strategies we are already using and critically evaluate them. (We should be concerned here not only with the efficiency of our corrections but also with their social and psychological implications, both in the classroom, and in a wider context.)

3. We should study our students' errors and be deliberate and selective in choosing systems for corrective work.
4. We should try to devise methods of correction that will encourage the students' active learning processes and which will take the cognitive aspects of these processes into account.

5. Finally, because of its negative connotations, perhaps the word 'correction' should be eliminated from our vocabulary and replaced by the word 'development'. Remedial work should be treated as a natural developmental aspect of the learning process. It should not be considered relearning the same thing, but rather learning something from a different perspective. In this respect, errors can be 'developed' continuously, without the student even being fully aware that they have occurred or that correction is taking place. (e.g. Remedial work can be introduced as a daily part of the lesson, treated as any other part of the lesson-- with the goal being progress rather than perfection (which is too often a frustrating and unrealistic challenge for both teacher and student.))

The approach I have outlined is sketchy and can only be considered as a starting point. Implementing these ideas requires of the teacher, a deep understanding of the complexities and problems involved in learning a second language as well as a tremendous expenditure of time and effort. But it is hoped that through such effort, and much more research in Error Analysis we will reach the point where:
"We may be able to allow the learner's innate strategies to dictate our practice and determine our syllabus: we may learn to adapt ourselves to his needs rather than impose upon him our preconceptions of how he ought to learn, what he ought to learn and when he ought to learn it."\textsuperscript{67}

The teacher who is willing to study\textsuperscript{68} and make the effort required to apply the theory to the classroom, can, I am convinced, achieve interesting and positive results.
TABLE I

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LINGUISTIC STRATEGIES: To account for the nature of the grammar the learner seems to be formulating.

INPUT

STRATEGY

OUTPUT

Intake and processing

Errors

Interlanguage

Type of Errors

ANALOGY (invention of non-existent forms)

INTERFERENCE

Mother Tongue

Target Language

OVERGENERALIZATION

Incomplete Application of Rules

Failure to Learn Conditions for Application of Rules

False Concepts Hypothesized

FORMULATING HYPOTHESES

TESTING RULES

REDUNDANCY REDUCTION

SIMPLIFICATION

MEMORIZING

PERFORMANCE

Lapses

Slips of tongue
TABLE II

COMMUNICATION STRATEGIES: To account for the semantic content of the learner's Language Development

<table>
<thead>
<tr>
<th>STRATEGIES</th>
<th>TYPE OF ERRORS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MESSAGE ABANDONMENT</td>
<td>SILENCE</td>
<td>air ball</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gas ball</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gas ring</td>
</tr>
<tr>
<td>FORMAL REPLACEMENT</td>
<td>WORD COINAGE</td>
<td>BALLOON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gas ball</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gas ring</td>
</tr>
<tr>
<td></td>
<td>CIRCUMLOCUTION</td>
<td>BALLOON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Special toy for children</td>
</tr>
<tr>
<td></td>
<td>DESCRIPTION IN</td>
<td>. . . . they were filled by gas -- bowls which are very light and flying</td>
</tr>
<tr>
<td></td>
<td>LIEU OF CORRECT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WORD OR PHRASE</td>
<td></td>
</tr>
<tr>
<td>MESSAGE ADJUSTMENT</td>
<td>GENERALIZATION</td>
<td>Dash off go</td>
</tr>
<tr>
<td></td>
<td>loss of detail and</td>
<td>Notice see</td>
</tr>
<tr>
<td></td>
<td>Subtlety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>APPROXIMATION</td>
<td>Clothesline rope</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kitten cat</td>
</tr>
<tr>
<td>ANALOGY</td>
<td>INTERFERENCE</td>
<td>INAPPROPRIATE STYLE*</td>
</tr>
</tbody>
</table>

THE LEARNER IS AWARE OF HIS GAP IN LT AND ATTEMPTS TO COMPENSATE USING COMMUNICATION STRATEGIES.

*see Richards (1971A - 1972)

**All of the above strategies and examples are taken from:

FOOTNOTES


(3) See - Corder, S.P. (1967)

(4) For example, see:
Ervin-Tripp, S.M. - (1974)


(7) Richards, J. P. 7 (1971A)

(8) See for example

Brown R. (1973)


(9) Richards, P. 8


- reach the same conclusion.


(14) Richards, P. 8

(15) Corder, P. (1973) p. 112
(16) Berko, J. (1958)


(18) IBID p. 208.


(20) But this may not be as significant a difference as we might think, e.g. Ervin-Tripp S. (1974) p. 112 writes:

"Now it is certainly the case that the second language learner makes use of prior knowledge, skills, tactics, but it is also true that the first language learner does this. That is, any learning builds on what has happened before, and it remains a major question just how this occurs. A child learning a language at four, whether a first or second language, has knowledge of the world, knowledge of spatial and object relations, knowledge of causality, which a child of one does not have. A child hearing a sentence he has never heard before, at the age of four can bring to it knowledge of sound groupings, recognition of familiar patterns, expectations about basic syntax meaning configurations, which a child of one does not have - whether or not he is listening to a new sentence in his mother tongue or a second language. The fact that the second language builds on prior knowledge is not what differentiates it from first language learning."

(21) Although motivation is considered important to success in second language learning, it is not clear whether motivation plays any part at all or for that matter what part it could play in first language acquisition.

Corder, P. (1973) p. 109. writes:

"Secondly the motivation (italics) for learning in each case cannot be equated. Indeed it is not clear in what sense we can use the term motivation in the case of language acquisition. Congenitally deaf children develop a means of non-verbal communication which appears to satisfy their needs at least in the earlier stages, so that it does not appear that young children must (italics) specifically acquire language (italics) to cope with their environment. Yet we observe that all children whose physical and mental capacities lie within what we can regard as a normal range do learn language. All we can say is that it comes naturally and not as a result of the discovery of its practical utility.

(22) Corder, P. (1973) p. 115.


"I propose therefore as a working hypothesis that some at least of the strategies adopted by the learner of a second language are substantially the
same as those by which a first language is acquired. Such a proposal does not imply that the course or sequence of learning is the same in both cases, (rather that the processes involved are similar) (my emphasis).


"Recent work treats the problem ... by regarding the child's competence at a given age as a self-contained internally consistent system not dependent on the full adult system."

(26) See e.g. George, H.V. (1972), Part I.


(30) Corder, P. (1971)

(31) Richards, J. (1971B) Appendix

(32) Compare


(33) Richards, J. 1971(A)
    1971(B)
Selinker (1972)
Corder (1967), (1971), (1973)
George (1972)
For a discussion of these problems
See particularly
Richards, J. (1971A)
Kellerman, E. (1974) and
Varadi, T. (1973)

Simplification can also be considered an instance of overgeneralization.


All examples are taken from Varadi, T. (1973).


"The study of errors, then, is a part of the psycholinguistic search for the universal processes of second language learning".


Corder, P. (1967) "Errors are not to be regarded as signs of inhibitions but simply as evidence of his strategies of learning", p. 169.


"Within this framework a second language learner's errors are seen to be similar to those of a child acquiring his first language. The errors of both are systematic and as such give evidence of the system to which they belong. Thus errors provide the researcher with evidence of how a second language is acquired, and they provide the learner with a way of forming and testing hypothesis about the nature of the language he is learning." (p. 145).

Valdman suggest that we consider teaching intermediate "ungrammatical" forms. He writes: "When the aim of second language instruction is the attainment of a minimal degree of communicative competence in very early stages of the course, one might advocate the teaching of intermediate forms which are in fact ungrammatical." p. 25.


"The competence of the second language learner has been compared with the full native competence at which he is aiming. The products of his successive grammars are evaluated, not by their consistency with his interim grammars, but by their conformity with the rules of full native competence."


Ibid.


"Indeed Cazden suggests that the first paradox in language acquisition is that while the attention of neither parent nor child is focused on language structure, that is what all children learn well. ("Two Paradoxes in the Acquisition of Language Structure and Function" Paper presented at a conference on the Development of Competence in Early Childhood, sponsored by the Developmental Sciences Trust, CIBA Fondation, London. p. 3.)

Our personal experience as ESL teachers in the primary grades suggests a first paradox in second language syntax instruction: while the attention of both teacher and child is focused on language structure, much of what is taught in class is not learned and much of what is learned was not taught in class."

Macnamara, (1973) p. 60

"Parents seldom correct a small child's pronunciation or grammar; they correct his bad manners and his mistakes on points of fact (Gleason 1967)."
Macnamara writes:
The child "vitally engaged in the struggle to communicate and supported by the approval of his parents, makes steady progress. His parents' attention is on his meaning, not on his language, and so probably is his own. And curiously he and his parents break one of psychology's basic learning rules. Psychology would advise that he should be rewarded only for linguistically correct utterances, whereas parents reward him for almost any utterance. But then the folk wisdom of the Italians, which is older than experimental psychology, has created a proverb which gives the lie to psychology and agrees with parent and child - sbagliando s'impara (by making mistakes, we learn.) Perhaps in all this there is a lesson for the schoolmaster. Perhaps he should concentrate more on what the child is saying and less on how he says it. Perhaps the teacher should lay aside the red pencil with which he scored any departure from perfection and replace it with a word and a smile of encouragement. The Irish too - not to be outdone by the Italians - have their folk wisdom: Mol an uige agus tiocfaid si (praise youth and it will come)."

"In first language acquisition an error shows that adult competence has not yet been reached and the grammar is still an interim hypothesis; in second language learning an error is taken to show that an item has been wrongly learned".

"Tolerance of errors is indirectly a factor in their prevention. Many errors are the result of generalization from inadequate experience, and the total experience of the learner can be drastically reduced by (a) the actual time spent on correction, and (b) the attitude and feelings towards learning standard forms of English which excessive arbitrary-seeming correction may set up."

"Correction requires that the teacher understand the source of the errors so he can provide the appropriate data and other information, sometimes comparative, which will resolve the learner's problems and allow him to discover relevant rules."
George, H.V. (1972) p. 80
outlines what he considers to be the most essential steps in remedial work. These are:

1. Identifying and listing unwanted forms
2. Selecting from the list a limited number of unwanted forms for remedial work, taking into account the time available, the likelihood of success within that time, the motivation of the learner, the frequency of occurrence of the error, the severity of impairments of communication, the consequence (if any) for the learner of having his English characterized by error.
3. Studying each error selected for remedial action, to isolate the reasons for its occurrence, and if where necessary and possible, preparing material for the reteaching, with a different approach, of the grammatical and/or conceptual basis of the wanted form.
4. Deciding organization and classroom strategy, especially and in the first instance, deciding whether to direct remedial work to spoken and/or written English.
5. Choosing or constructing remedial material for the specific errors.
6. Fitting into the teaching program and classroom work sustained attention to the errors.

"The learner is in a different stage of learning in respect of every different system of the language".

"The learner is in a different stage of learning in respect of every different system of the language".


"It would be wrong to accord all errors equal status within the learner's grammar".

Valdman, A. (1974) p. 16, Implies that
It is pedagogically useless to concentrate on the elimination of isolated errors. He writes: "Since errors reflect the way in which learners acquire linguistic competence, they must serve as a basis for the ordering of grammatical features and beyond that for the establishment of objectives and aims of instruction".


George, H.V. (1972) p. 64.
"Simple provision of the correct form may not always be the only, or indeed the most effective form of correction since it bars the way to the learner testing alternative hypotheses. Making a learner try to discover the right form could often be more instructive to both learner and teacher."

"I don't see anything against explicit rules and, with two provisos, they are probably a great help. First, the student must not expect to find rules for everything; he must trust his common sense or linguistic intuition. Second, he must learn to get on as soon as possible without explicit rules; he must be prepared to surrender himself to their automatic operation. I imagine that the only reason for distrusting explicit rules is the fact that some people have difficulty in abiding by these two counsels."

Consider for example homonyms and homographs. It doesn't help to teach a student in the same lesson that 'row' is both a verb and several nouns, each with a different pronunciation.

"Errors are explained as evidence of principled, but incorrect guesses about the rules of the target language."

Some research has been done on reactions of native speakers to different types of errors (e.g., Richards (1971A) and Richards (1972)). Given the limitations of the classroom situation, it can be useful to the teacher to take the results of such research into account in deciding what errors to concentrate on developing.
I particularly recommend three books which emphasize the application of Error Analysis Theory to the classroom.

H.V. George: 
(1972) 
Common Errors in Language Learning - Insights from English

Pit Corder: 
(1973) 
Introducing Applied Linguistics

Marina Burt and Carol Kiparsky: 
(1972) 
The Gooficon, A Repair Manual for English 
ERRORS: A NEW PERSPECTIVE/

LES ERREURS: POSCONS LE PROBLEME AUTREMENT

DIVISION DE LA RECHERCHE/RESEARCH DIVISION
DIRECTION DES ETUDES/DIRECTORATE OF STUDIES
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