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ABSTRACT
        This paper is an attempt to claim that teaching
English as a foreign language (TEFL) can be an autonomous discipline
and that it needs to be a single discipline instead of bits and
pieces of related sciences put together. A workable theory of TEFL
could have its basis on the general framework of communication. What
is needed is an integrated system of whom to teach, what to teach,
when to teach, how to teach, and what to teach for. This paper
examines whether TEFL can possibly be an autonomous science with
scientific structure and discusses the scientific reasoning that
would form the basis for such a discipline. (Author/VM)

TOWARD CONSTRUCTING A THEORY
OF TEACHING ENGLISH AS A FOREIGN LANGUAGE (1):
PRELIMINARY CONSIDERATION

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This paper is an attempt to claim that Teaching of English as a Foreign Language
(abbreviated is TEFL hereafter) can be an autonomous discipline. Put more properly, it
needs to be · discipline instead of bits and pieces of related sciences put together. We have
seen quite a substantial amount of practice done in this field of TEFL, while, to our regret,
those practices have not been supported by an integrated theory or theories. Our urgent
task, then, will be constructing, or more practically, making efforts to come up with, a theory
to make this business of TEFL an intellectually independent field of science.

1. 1

t We need a theory of foreign language instruction. By this I never mean that a theory
or theories, if obtained, provide a panacy for TEFL. We need a theory to make foreign
language instructruction a self-productive system. We cannot leave this question to someone
else just commenting that this field is too complicated to speak in a word. Unfortunately,
however, this has been general practice in the profession. As Spolsky remarked, Chomsky's
address to the 1966 Northeastern Conference on Language Teaching disturbed and confused
many applied linguists and language teachers.[1] What Chomsky said was about as yet
inadequate state of linguistics and psychology in order to provide enough information on
language learning and teaching. The disturbance and confusion among those supposed
"specialists" in language instruction clearly tell what attitude those people have toward
foreign language instruction. They believe in that a theory of their practice is to be provid-
ed by linguists and psychologists. They do not even specify their own job. They usually
rely on a handful of textbook writers for the material they use, equipments and aids for
electronic engineers. Could it be a healthy picture of language instruction, if the language
teacher is a conveyer of learning material provided by linguists within the framework given
by psychologists? This kind of apathy on the side of "specialists" of language instruction
occasionally draws such consolation from those who advocate programmed learning, computer
asisted instruction, or language laboratory as 'these devices never mean exclusion of
"human" teachers out of the classroom.'

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[1] B. Spolsky, "Linguistics and language pedagogy," in J. Alatis (ed.) *Monograph Series on Languages
and Linguistics,* 22, 1970, p. 144.

To show an example from scenes in TEFL in Japan, we notice very clear shifts in leading idea of the field. Starting with the Grammar Translation Method, she was first shocked by the Oral Method. Unfortunately this shock was not as influential as one might suspect considering the fact that the beginner of the method did most of his work in Japan. The reason for the unexpected unpopularity can be attributed to the socio-cultural atmosphere of Japan in those days. After the most depressed period for foreign language instruction, she saw a revival with the introduction of Oral Approach in 1940's. This new method in foreign language teaching overwhelmed all over the country and drove out the last method. And now the Oral Approach is, after enjoying about twenty years' popularity, going to be put aside on the appearance of a new concept in linguistics.

All these shifts were not brought about from within the world of foreign language instruction, but were just picked up because they were there. We may follow the same procedure as a new idea, which is usually new on appearance and with a shift in emphasis, comes out in other fields. We cannot deny the possibility either that we may adopt a 'new' idea whether or not it is relevant to our field. And further, we must admit that we have erred this once before. How new and feasible the idea may sound, the truth is that it *is* new and valid within the framework of its own discipline. The decision on whether it is applicable to our field or not should be in our hand. And what does this function of screening is the very theory of TEFL.

If we define our theory as a framework to understand and predict the world of foreign language instruction, it follows that we could not plan our practice, nor develop adequate materials, nor train teachers. Theory has a built-in function to deny itself. This function of theory makes us understand and predict the world. Mere assembly of data or descriptions collected without defining boundary cannot be fed into the system of theories. The fact that we have accepted too readily the findings and results from other sciences shows the lack of systems in our TEFL practice. Another factor which has been hindering appearance of a theory in TEFL is found among teachers and "specialists" of TEFL. It is a strong bias that TEFL does not go beyond practice, or art. Of course, teaching and learning of a foreign language is an art, but it can have its own science to support the art.

1. 2

Defining the direction of theory building in TEFL as interdisciplinary, we need to specify the characteristics of TEFL. Since the suggestion by Palmer the simplest diagram to explain the characteristics has been that of triad (linguistics, psychology, pedagogy). Titone suggests that interdisciplinary programming be done on cooperation among linguists, anthropologists, psychologists, neurologists, and interested teachers.[2] Description of complicated characteristics of TEFL could be done in various ways. Different pictures will depend upon how to dissect TEFL. Indeed Palmer's triad would be a way to view TEFL, but it is also

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[2] R. Titone, *Teaching Foreign Languages: An Historical Sketch*, Washington, D. C., Georgetown University, 1968, p. 112.

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true that application of the established categories of science to such an inclusive field as TEFL does not necessarily offer a means to scratch an intellectual itch, especially when we are groping for theory building of TEFL. There is another danger in adopting this triad. As is well known, no one of these three disciplines has as yet reached a unanimous agreement within each field. The more the different schools compete with each other, the more we get confused as long as we depend on them for theoretical support.

We need to look at TEFL from a different angle. When we look at our field from a very simplistic view point, everyone of us could agree that our field has, roughly speaking, three components: subject matter, learner, and media. We could assert that learning or education occurs in the interaction of these three. In terms of theory building, these three will be called subject matter and essential factors in determining boundary of our theory. And with these three basic components, the interdisciplinary structure of TEFL will be diagramed as in Fig. 1.
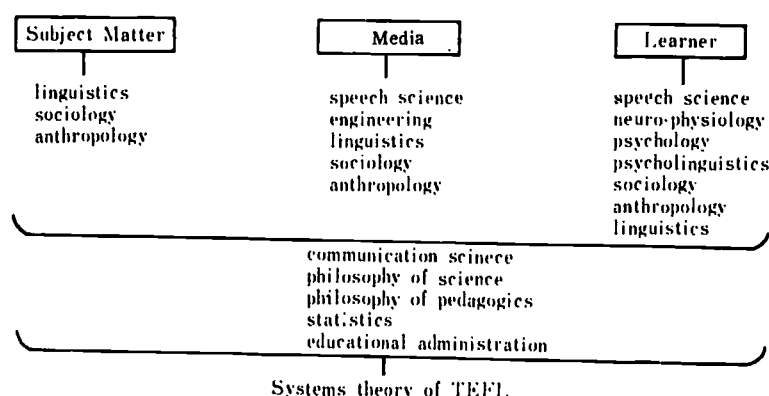
Subject Matter	Media	Learner
linguistics sociology anthropology	speech science engineering linguistics sociology anthropology	speech science neuro-physiology psychology psycholinguistics sociology anthropology linguistics

communication science
philosophy of science
philosophy of pedagogics
statistics
educational administration

Systems theory of TEFL.

Fig. 1

2.

As is suggested in the diagram above, workable theory of TEFL could have its basis on the general framework of communication. Linguistic findings will tell us the structures and interrelationships of them in language. But these structures and rules do not teach. Psychological findings will show us to some extent how and when learning takes place. But again they do not teach, either. What we need is an integrated system of to whom to teach, what to teach, when to teach, how to teach, and what to teach for. Among these categories of questions the priority should go, when thinking of a theory or a system, to what to teach and learn for. This is justified as follows: Any educational enterprise, if it be educational at all, is a process of bringing about changes to the learner according to some definite intention. Education is formal learning distinctly separated from informal learning which occurs with no intention neither on the part of the learner nor on the part of the environment. What we are concerned with is not the latter but the former kind of learning. Then the very first and crucial question we have to give an answer, although it may be tentative, is what we expect of the learner after he has gone through a course of instruction.

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TEFL needs to be conceived in a broader context. It is not merely what its literary meaning implies. Our ultimate goal can be set as better understanding of our fellow human beings through language. If we hypothesize language pedagogy as such, TEFL necessarily falls on under the category of communication between peoples of different languages. Conveniently this category is called intercultural or cross-cultural communication in the science of communication. Of course there are several proposed communication models, which will again disappo...t those who tend to borrow the conceptual framework for TEFL directly from other disciplines. However, the basic concept of triad, source transmitter, receiver, which is adopted in every communication model, can well serve for our purpose here.

During the course of learning and teaching, source is subject matter, the target language, transmitter is a whole system of media including the teacher, and the receiver is the learner. What we want as the result of instruction is that the learner could be both source and receiver in an ordinary communication model. He is expected to communicate with the other across linguistic and cultural boundaries.

Another important point in considering theory building of TEFL lies whether we regard TEFL as a system or not. As is shown in the former section, TEFL is really multi- and inter- disciplinary. This peculiarty of TEFL necessarily draws our attention to so callled systems approach. Systems approach has emerged as a new way of organizing thinking in problem solving, evaluation, and the planning for the development of complex organism, as the result of technological developments in weapon systems, and aerodynamics, etc. Now this idea is being applied to social scineces. Its application to education seems to be as yet on the pioneering stage. The promising feature of systems approach appears to lie in the statement by Gagne.

> Systems are described as man-made "synthetic" organism, whose components, subsystems, and interactive mechanisms have analogous functions to those of biological organisms,. . Because of the nature of a syntactic organism, the functioning of its parts and subsystems may be studied directly, thus providing a means of developing systematic accounts of the process of interaction within the system, as well as their effects on total system functioning.[3]

Systems approach seems to provide a workable principles for TEFL as an instructional system.

Besides an instructional system, TEFL must solve another problem, i. e., that of multi-discipinarity. To make TEFL an independent intellectual entity we must give a solution to how those pertinent disciplines are interrelated and serve to structure TEFL. The present situation of structure within TEFL would be called unfortunately, "undisciplined." What gives coherence to the unorganized disciplines will be General Systems Theory.

General Systems Theory came out, according to Bertalanffy,[4] to give unity to scientific

[3] R. M. Gagne, "Psychology and system development," in Gagne (ed.) *Psychological Principles in System Development*, New York : Holt, Reinhart & Winston, 1962, p. 12.

[4] L. von Bertalanffy, "General systems theory," *General Systems*, 1, 1956, p. 1.

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theories which became so specified. Its subject matter is the formulation and derivation of those principles which are valid for "systems" in general.

> ...General System Theory is not a search for vague and superficial analogies between physical, biological, and social systems. Analogies as such are of little value, since beside similarities between phenomena, dissimilarities always can be found as well. The isomorphy we have mentioned is a consequence of the fact that, in certain aspects, corresponding abstractness and conceptual models can be applied to different phenomena. It's only in view of these aspects that system laws will apply.[5]

General System Theory is, of course, not for only TEFL, but its basic concept to develop interdisciplinary basal principles nicely fits what TEFL is looking for.

Within the framework described so far, I would like to define what the specialist of TEFL, or the scientist of TEFL, is expected to do before going further in disucussing theory building for TEFL.

The scientist of TEFL needs to be a generalist in science and system engineer. As far as we know the "specialists" in TEFL were those people whose major academic concern and training was linguistics, English philology, or literature, and occasionally psychology. It is very natural that they should conceive TEFL with their speciality as the core for TEFL, which is now obviously of little power to integrate the complex of TEFL. And specification of science is advancing with still greater speed and force. It is a truism that no one single discipline can now cover the whole field of TEFL. Even a new field of knowledge may come out as we have witnessed the appearance of biochemistry, biophysics, or the sort. Then it would be clear that it is highly risky to look at our field only through the windows of the now extant sciences using their philosophies and methods. An indispensable qualification for the scientist of TEFL is knowledge of systems theory with which he can classify the information supplied by the related scineces and organize it to serve the ultimate objective of his system, TEFL. Therefore, his task is first to draw a plan of the system of TEFL and prepare various pots into which he can plug the necessary information from the enviroment of the system. The first step toward this is to look at the phenomena of TEFL and set up the ultimate purpose and then sub-goals so that he can select the incoming information which will serve only for his intention.

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Now we need to examine whether TEFL can possibly be an autonomous science with scientific structure. For TEFL to be called a science it must conform to certain generally recognized requirements.

Science has its subject matter, makes careful, objective observation and description upon the subject matter, makes generalizations upon the results of its description, makes predictions based on the generalization, and then, finally, test the predictions against the 'world.' When the results of the test agree with the predictions, it is permitted to state a law. It is

[5] *Ibid.*, p. 2.

a self-correcting body, redefining its subject matter, refining its observation, restating and revising its generalization.

Let us now apply these criteria to 'science' of TEFL.

1. The subject matter of TEFL is all the systems of learning behavior and communication behavior which occurs with a foreign language as its medium.

2. Objective description of these behaviors are possible by pencil and paper method, and by use of various instruments such as tape recorders, oscillographs, sound-spectrographs, video-tape recorders, and by some sets of test.

3. The kinds of generalizat'on are about how and what and when learning occurs and about how, what and when communication occurs.

4. Predictions are about structure and mechanism of learning and communication.

When the predictions are confirmed against the actual world, we will have a law (or laws) of TEFL.

4. 1

In this section the strategy for theory building will be discussed.

Dubin states that a "theory is a model of some segments of the observable world. Such a model describes the face appearance of the phenomenon in such terms as structures, textures, forms, and operations."[6]

When building a theory we must first observe the behavior in our environment which lends itself futher understanding and from which it may be possible to formulate further predictions. In the construction of a theory it is necessary to define and describe the units of theory. Collection of units constitute the subject matter of a science. There are two qualities to units; attributes or variables. All the units belong to either of the two. An attribute is a property of a thing distinguished by the quality of being present. A variable is a property of a thing that may be present in degree. These two units are again divided into two, real units and nominal units. When there are empirica₁ indicators available for the units, they are called real units. While there are no empirical indicators available, they are called nominal. The nominal units are obviously beyond empirical reach, but the inclusion of nominal units into theories is essential for theory building and to increase knowledge about real units.

There are basically five different kinds of units. These are (1) enumerative unit, which is a property characteristic of a thing in all its conditions, (2) an associative unit, in which a property characteristic of a thing occurs in only some of its conditions, (3) a relational unit, which is a property characteristic of a thing that can be determined only by the relation among properties, (4) statistical unit, which summarizes the distribution of that property in the thing, and (5) summative unit.

In building a theory it is of importance to determine the interaction of the various units. Linkage among units of a theory is labelled as its laws of interaction. There are three general categories expressing relationships of units: (1) categoric laws, (2) sequential laws,

[6] R.Dubin, *Theory Building*, New York : The Free Press, 1969.

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and (3) determinant laws.

The units of a theory are also controlled by the boundaries of the theory. A theory or a model cannot be a rigorous representation of the world unless it knows its limits, i. e., boundaries. It is important that these boundaries are not too specific, and thus too confining, nor too general, thus not confining enough. Behavioral scientists have typically used theories of middle range. A theoretical model is said to be bounded when the limiting values on the units comprising the model are known.

Theoretical models must also be considered as a system state. A system state is the statement of the system as a whole. The criteria of a system are (1) to be inclusive, (2) to be determinant, and (3) to be persistent through time.

From the construction of a model and the formation of its units with respects to the boundaries, laws of interaction, and system states, propositions about the model can be formulated. A proposition is a truth statement about the model. The use of a model is to generate predictions or to make truth statements about the model in operation.

The ultimate goal of theory building is to test the theory for its applicability to the actual world. The final step in theory building is, then, to have a set of hypotheses and to test them against the empirical world. The diagramatic representation of the process of theory building is shown in Fig. 2.[7]
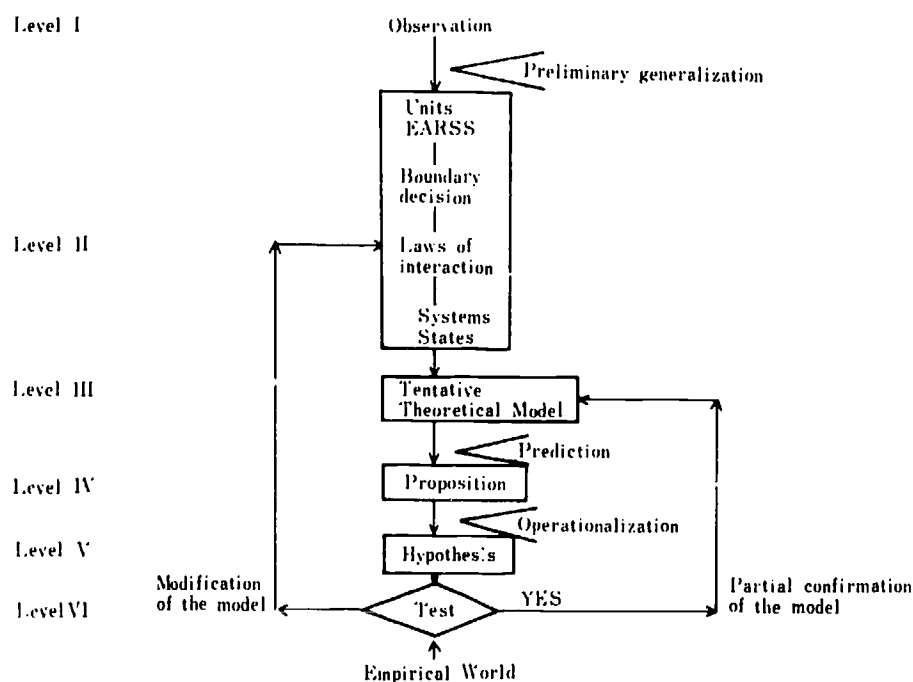

Fig. 2

4. 2. 1.

To set a boundary and to give clues to define units we must start with defining what is

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[7] This is based on R. Dubin's concept of theory building. The diagram has been approved by Dubin himself through personal communication.

meant by knowing language. This again will be used as the important criterion to judge whether the system of TEFL has worked as expected.

Fries defines 'mastery' of a foreign language as follows:

A person has "learned" a foreign language when he has thus first, within a limited vocabulary mastered the sound system (that is, when he has understood the stream of speech and achieved an understandable production of it) and has, second, made the structural devices (that is the basic arrangements of utterances) matters of automatic habit.[8]

Fries assumes that learning of a foreign language proceeds from mastery of sound system and then to structural systems. Learning is equated with *understanding* of the stream of speech and *understandable* production of it and with habitual control of structural devices. What performance is expected when the learner reaches the stage of 'mastery' is rather put less emphasis in contrast with linguistic entities he can manipulate. The key note of Fries' statement on 'mastery' of a foreign language could be found how he defines the size and amount of linguistic items necessary for the foreign learner.

Lado defines 'mastery' as follows:

Learning a second language is defined as acquring the ability to use its structure within a general vocabulary under essentially the conditions of normal communication among native speakers at conversational speed.[9]

In Lado's context, one is said to have learned a second language when one can use the units of the target language both in speaking and listening under normal environments of the target language. Lado's statement is different from Fries' in that Lado refers to "ability" while Fries does not. The notion of ability is a nominal unit by nature. Whether or not it can serve as real unit in the whole system is dependent on what attributes and variables we assign to it and how to operationalize them. Lado's notion of ability is, however, different from the one talked among the other camp of linguistics.

Spolsky defines knowing a language as follows:

The key aspect of knowing a language is not the knowledge of a set of words or sentences, but the *ability* (italics are mine) to recognize and produce new combinations of words, novel sentences. This ability to handle novel sentences is one that can only be explained by postulating control of a grammar. In this sense, knowledge of a language is indicated by evidence of control of the rules, the grammar, that underlie the language.

The ability implied by Spolsky is the now famous notion of 'linguistic competence.' The emphasis is again on now famous 'linguistic creativity.'

[8] C. C. Fries, *Teaching and Learning English as a Foreign Language*, Ann Arbor: The Univ. of Mich. Press, 1945, p. 3.

[9] R. Lado, *Language Teaching*, New York: McGraw-Hill, Inc., 1964, p. 38.

[10] B. Spolsky, "Do they know enough English?" in David C. Wigglesworth (ed.) *Selected Conference Papers of the Association of Teachers of English as a Second Language*, Los Altos, Calif.: Language Research Association Press, 1967, p. 31.

People in this camp talk down the imitation and repetition as 'language-like behavior' which can be done even by parrots. Indeed behaviorists did avoid stepping into the Black Box. They try to infer what is going on inside the 'box' manipulating the inputs and outputs. This is simply because, to my knowledge, they judge there are no real units available which stand a test against the empirical world and can be integrated into the whole system of human behavior. Transformationalists and cognitive psychologists are now trying to dissect the 'Box.' It is really a wonderful enterprise, which everyone, concerned with language at all, would be excited about. The innate idea or linguistic competence or linguistic creativity is a sheer nominal unit. Every possible effort must be done to make this nominal unit into a real unit. Troike's report,[11] Stevens and Halle's report,[12] or Lenneberg's discussion on knowing language[13] tells us there is a way to make an inquiry into this problem. But the evident fact is that they cannot do any single research or an experiment without referring to the overt behavior of their subjects, i. e., *performance*, which they discard as a criterion to measure knowledge of language.

The question of what knowing language is still a very hazy one, and its solution is beyond our reach. Then do not we have any clues to tackle with our problem? We have another possible way to look at TEFL neither relying on " linguistic competence " nor "mechanistic skill building." It is, as was mentioned in the earlier section, to put TEFL in the scope of communication. People in the Audio-Lingual camp are now beginning to join this idea.[14]

It is difficult to state knowing language in operational terms. However, if we adopt the framework of communication, we could say that one has learned or knows the language when one is able to participate in communication in the environment of the target culture using the target language as the medium. A very unique and very promising program for TEFL based on this idea has already been done by Dykstra.[15]

4. 2. 2.

Now, let's look at the educational implication of setting up objecitives. Gagne says that "we *infer* that learning has occurred when there is difference in *performance* of the student from time X to time X+'1 (which difference for other reasons we cannot attribute to growth).

[11] R. Troike, "Receptive competence, productive competence, and performance," *Gerogetown Monograph*, 22, 1970, pp. 63-69.

[12] M. Halle, & K. N. Stevens, "Speech recogniton: a model and a program for research," in Katzt and Fodor, (eds.) *The Structure of Language*, Englewood Cliffs, New Jersey : Prentice-Hall, Inc., pp. 604-612.

[13] E. H. Lenneberg, *Biological Foundations of Language*, New York : John Wiley, & Sons, Inc., 1967, pp. 330-331.

[14] R.F. Roeming, "Foreign language teaching in the creative mode," *MLJ*, 52 (4), 1968, pp. 216-219.

J. A. Upshur, "Productive communication testing," Second International Congress of Applied Linguistics, Cambridge, U. K., Sept. 1969, mimeo.

[15] His work was partially introduced by Kaneda in *The English Teachers Magazine*, Taishukan, Tokyo, 20 (1), Apr. 1971, and 21 (2), Feb. 1972.

Change in performance is what provides evidence of learning."[16]   This notion of learning in terms of change in performance is most suitable to interprete learning into measurable forms.   Learning in terms of measurable forms is the goal of instructional practice, and the valid test in assessing the learner's change.

According to Gagne we need objectives as necessary guide for the behavior of the teacher, as the indicator of targets for the students and as a means to estimate the developmental stages of the student.[17]

In defining objectives we must take into account following points of considerations.

...it must be the smallest unit of performance which can be identified as having a distinct and indenpendent purpose.

...the most useful level of specificity is at the level of generality of behavior that one is seeking to help the student acquire.

...objectives should express a purpose which makes sense within the larger context of the person's life goals.   This purpose should be distinguishable from others.[18]

Once objectives are defined, they need analyzing into finer units to examine the interrelations among objectives, assess student progress in more detailed term, and to determine the conditions for learning.[19]   After analysis of objectives there comes out reduction in complexity, that is, great variety of performance begins to ft together into categories, which can then be dealt with and thought about as classes of events.[20]

Gagne postulates six categories of behavior: (1) simple connection, (2) chain or sequence, (3) identification, (4) concept, (5) principle, and (6) higher-order principle or general principle.[21]   Behavior becomes more complex as it advances from (1) to (6).   If we take this as a truth statement, learning first takes place on the concrete level and then gradually adds the degree of abstractness.   This will provide a counterargument agaisnt those who say that learning of surface structures never leads to the acquisition of linguistic competecne, for behaviors (1) through (4) are more or less concerned with 'surface structures.'   And higher-order of learning requires preliminary lower-order learning.

4. 2. 3.

Here I would like to mention an assumption related to acquisition of language.   It is about the comparison of first language acquisition with that in second language.   Lenneberg's proposal of the notion of critical point in language acquisition is convincing enough. Chomsky is correct when he says overt language behavior is one thing and competence is

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[16] R. M. Gagne, "Educational objectives and human performance," in J. D. Krumboltz, (ed.) *Learning and the Educational Process*, Chicago : Rand McNally, 1965, p. 4.

[17] *Ibid.*, p. 10.

[18] *Ibid.*, pp. 12-13.

[19] *Ibid.*, p. 17.

[20] *Ibid.*, p. 18.

[21] Ibid., pp. 18-19.

another. Performance is sure to be influenced by so many non-linguistic factors. All these imply that acquisition of the first language and that of a second follow definitely different procedures, when one starts learning a foreign language after 11 or 12 years old. Here let me go back to Troike's report to support an assumption that the linguistic competence exists in one's first language and not in the second when he starts learning it as a linguistic adult.

The learner who is already an adult linguistically cannot develop another set of competence by learning "innate rules." His 'linguistic competence' in second language can be installed beginning with the language behavior on performance level and not vice versa. However true the deep structure approach may be, teaching of those hidden, abstract rules never makes a user of the language. As is illustrated in a report by Spolsky, nonnative speakers who can communicate as freely as native speakers lower their proficiency when they are given a sort of masked speech. Native speakers can understand considerably mutilated speech. This will tell us that nonnatives have not internalized the "redundancy features" of the language, although they can operate as well as natives on the surface level which present every redundant feature. Nonnatives, therefore, are to try to approximate the native competence through all the process of learning and actual experience in the linguistic environments. Not to speak of the process of learning, transformational grammar can provide us criteria to select and arrange learning material when they have solved the mechanisms of "redundancy."