RELATIONS BETWEEN PSYCHOLINGUISTIC APPROACH AND FOREIGN LANGUAGE LEARNING AND TEACHING

RUHDILBILİMSEL YAKLAŞIM VE YABANCI DİL EĞİTİMİ VE ÖĞRETİMİ ARASINDAKİ BAĞLANTILAR

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Abstract:
The basic status of the psycholinguistic approach has always been disregarded in the field of foreign language teaching and learning. As a matter of fact, this field of study is the first initiator of the area of foreign language teaching and learning. In this article, as a field of interdisciplinary study, various relations of the psycholinguistic approach to mother tongue teaching and foreign language teaching are investigated by giving solid sources. As a result of this investigation it has been discovered that the psycholinguistic approach, in fact, as an interdisciplinary study, has a problem solving relation in ELT, and that it has a blocking function of the negative transfers of the interferences from the mother tongue to the target language in terms of teaching reading-writing-listening-speaking skills.

Key Words: psycholinguistics, psycholinguistic approach, behaviorism, neurolinguistics, biolinguistics, basic skills, mother tongue interferences, and English Language Teaching (ELT).

1. Introduction

Psycholinguistic approach takes its name from the field of psycholinguistics which is an integration of the two fields of psychology and linguistics. That's why it is referred to as a hybrid field. According to Titone and Danesi (1985:31), the term psycholinguistics was coined by Pronko in 1946. However, a systematic theory was not
formulated until 1950. Basically, psycholinguistics is the study of relation between language and mind. In general, it is defined as the study of the mental processes that a person uses in producing understanding and storing language and how humans learn their mother tongue and foreign languages. The interdisciplinary field of psycholinguistics emerged twice: once in 1900s in Europe and once in the middle of the 20th century in the USA. In early decades of the 20th century, linguists turned to psychologists for insights into how human beings use language. In the later period, psycholinguists turned to linguists for insights into the nature of language (Carroll, 1994:112). Between these two periods, behavioristic views dominated the area.

2. The Birth and the Development of the Psycholinguistic Approach

Speech is one of the distinctive features of human beings that differs them from the other species. So, its properties and functions in the life of man is an indispensable part of psychological enquiry. Scientific psychology emerged with the development of the first psychological laboratory at the University of Leipzig in Germany in 1879. Psychological point of view about language flourished with Wilhelm Wundt (1832-1920) who was trained in experimental psychology and believed that the study of language could provide important insights into the nature of mind. Since he wrote extensively about many different aspects of language, he is regarded as the master psycholinguistics. Between 1870 and 1900 most of the investigations in child psychology focused on the development of speech in early childhood, especially studies on memory and mental associations involved the use of language.

In 1912, J. B. Watson coined the term Behaviorism. By the 1920s, Behaviorism advanced in America and took over the mainstream of Experimental psychology. Behaviorists like J.B. Watson, L. Bloomfield, and B. F. Skinner were able to apply to human speech the same principles that they applied to the description of other human and non-human kinds of behavior. The manner in which parents shape their children's utterances was described by Skinner in Verbal Behavior:

In teaching the young child to talk, the formal specifications upon which reinforcement is contingent are at first greatly relaxed. Any response which vaguely resembles the standard behavior of the community is reinforced when these begin to appear more frequently, a closer approximation is insisted upon. In this manner, very complex verbal forms may be reached (Skinner, 1957:29-30).

So, the acquisition of language in infancy was explained by means of the same mechanism of learning the acquisition of other habits. In the studies carried out between 1920s and 1950s language development mainly regarded as "a matter of imitation, practice and habituation" and psychologists supporting the behavioral tradition regarded "conditioning as the main mechanism to account for language development" (Stern, 1983:302). The Empiricist theory of learning as well as the behaviorism pointed out that the totality of human language comes from the experience. This period is generally regarded as the "formative period" in the historical
development of psycholinguistic approach. In this period, the following issues are made the job of psycholinguistics: 1. How people comprehend language? 2. How do they produce it? 3. How and under what circumstances do they lose it? 4. How does a particular language affect cognition, if at all? 5. Are there relations between the first and foreign language learning? 6. Is there such a concept like mother tongue interference?

By the early 1950s psychologists and linguists started to give and take ideas between these two disciplines: in 1960s with the rise of Transformational Generative Grammar, which was put forward by Chomsky, became very popular and the psycholinguistic approach, which tried to handle the unknown in the first language acquisition. These two cases gained a different theoretical ground for research. Chomsky and others, in particular the neuropsychologist, Lenneberg, decided that language development could not be defined with the terms of behavioristic psychology. In addition, the psychologist George Miller collaborated with Chomsky, some articles and studies soon appeared in press. Thus, language development became a popular topic for investigation and many scholars such as Braine, W. Miller, S. M. Ervin, D. McNeil contributed to the research on language acquisition. During this period “theoretical analyses of language development emphasized the role of innate factor” (Carroll, 1994:17). An innate mechanism to process the linguistic data such as language acquisition device (LAD, hereafter) was postulated. So, Mentalist and Rationalist (Cognitive) theories emerged with the psycholinguistic approach to explain the learning of first language (Demirezen, 1988:176-177). Soon after this, Chomsky developed the Nativist approach to unearth the riddles in learning the mother tongue by claiming that mother tongue language learning is an inborn process. The findings of biology and neurology, via the establishment of two new field namely, biolinguistics and neurolinguistics, supported the ideas put forward by Chomsky. Especially with such contemporary techniques of neurology as PET (Positron Emission Tomography), regional Cerebral Blood Flow Scanning and CAT (Computer Assisted Tomography) still we continue to learn the riddles on how languages are learned, neurologically processed, and remembered in both injured and healthy subjects.

According to Reber’s examination on the number of references in psycholinguistic studies in 1987, he found that “they rose sharply in the late 1960s, peaked in the middle 1970s, and then fell off by the early 1980s” (Carroll, 1994:17). Since syntax-based models of Chomsky, McNeill and others ignored the semantic relationships, Blomm, Sobin, Bowerman, Lahey, Reber, Schlesinger, Fodor and others put forward the idea that the “generative rules of nativists were failing to account for the functions of language”(Brown, 1994:28). Funtualist aspect in the psycholinguistic approach widened the viewpoint with the idea that” the child grammar is semantic, not syntactic” and on the basis of cross-cultural studies, Slobin and Brown concluded that “the early semantic rules are universal and that early mutimorpheme utterances are governed by a small set of operations” (Bhat, 1991: 21). They claim that these universals in rules indicate a general
pattern of cognitive development not innate structures. In the following years, with the flourishing ideas on the importance of environment sociolinguistic approaches to the first language acquisition considerably improved.

Nowadays, psycholinguistic approach has increasingly been viewed as a section of the interdisciplinary field of cognitive science which also covers computer science, philosophy, neuroscience and other related fields. As it is also indicated by Kess, psycholinguistics is being "subsumed under the larger scheme of research, in that truly broad interdisciplinary activity that has come to be labeled as cognitive science" (1992:25).

3. Basic Principles of the Psycholinguistic Approach

As it is known and accepted by everyone, no child fails to learn a native tongue and it is mainly learned before the age of five. Children are not taught language formally, but they all reach the same level of proficiency in using their native tongue by the time schools begins. It is amazing how each child succeeds in acquisition and possesses the same general abilities in using the language without the proper help of grown-ups. Therefore, this is an area of enquiry form which the psycholinguistic approach is able to suggest some formative notions. The basic characteristics of the psycholinguistic approach are as follow:

Psycholinguistic approach supports the idea that language acquisition is innately determined; that is, it is rewired by birth since both acquisition and improvement in language are a biological process.

Acquiring a language, which is specific to human beings, requires certain perception skills, cognition abilities and other mechanisms that are related with language. The child’s mastery of his native language in the first few years is enabled by LAD. As it is asserted by Kess "the stages of learning the mother tongue appear to be very similar across languages and the principles which guide the child's formulations at successive stages may well be universal" (1992:318). Thus, in child language acquisition research in order to discover what all children bring to the process of learning, psycholinguistic approach makes use of Universal Grammar which is in a way an expanded version of LAD notion. LAD works very well up to puberty. What happens to LAD after puberty is a matter of heated discussion today.

Categorizing is basic to human cognition and allows children to extend their knowledge of language. Early semantic development may be formed by the child's cognitive perceptions and grouping. Children usually make use of properties such as color, shape, and size to form categories and for this reason as cited in Kess (1992:311) "a legless lizard is not a snake" but because of inefficient grouping children may call it as a snake". As the child grows up the categories improve and become more in number. So, even different groups are also achieved.

The forms of language are organized in the mind of human beings with interdependent connections of memory, perception, thought, emotion, and other abilities (Brown, 1994:28). Such types of memory as short term memory, long term memory,
semantic memory, pragmatic memory, interim memory and the like are all dependent on psycholinguistic background (Demirezen 2002a-200b).

Psycholinguistic approach regards competence and performance as distinctive features of knowing a language. Competence is defined as "one's underlying knowledge of a system, event, or fact ...non-observable ability to do something" and performance is "observable ability to do something, to perform something"(Brown,1994:31). This view was first put forward by Ferdinand de Saussure as a distinction between langue and parole in 1916. Later Chomsky worked on linguistic competence and performance in 1965. Yet competence and performance as terms are still inadequate to cope with the language learning process since such new terms as communicative competence, pragmatic competence, and interlingual and intralingual competence type, which all have psycholinguistic bases are being developed.

In addition to competence and performance distinction, psycholinguistic approach points out the difference between comprehension and production. According to this view, while acquiring the first language, children understand more than they can actually produce and children's comprehension precedes production. Even adults understand more vocabulary than they ever use in speech, so is the case for child language and in all aspects of language, comprehension precede or facilitate production. Findings from educational psychology give a great deal of support to this fact.

In the acquisition of all languages, semantic learning is dependent upon cognitive development. According to Bhat (1991) as it is proposed by Slobin "...development is paced by the growth of conceptual and communicative capacities...(and it) is paced by the growth of perceptual and information-processing capacities".

In brief, psycholinguistics is fundamental to not only mother tongue learning but also to foreign language learning. It helps to develop language learning pedagogy both in the field of first and second language learning. It draws parallelisms to Stephen Krashen's monitor model and input hypothesis, but it also claims that the natural approach, created by Krashen, is weak because it disregards the sociopsychological issues in teaching foreign languages.

4. Strong Points of the Psycholinguistic Approach

Psycholinguistics and its offspring the psycholinguistic approach can be regarded an integral part of mother tongue learning and foreign language learning because of the following features:

The notions offered by psycholinguistic approach have made important contributions to our understanding of the first language acquisition. It provided us with "freedom from the restrictions of the so-called-scientific method- to explore the unseen, unobservable, underlying abstract linguistic structures being developed in the child" (Brown, 1994:28). In other words, instead of rejecting to study mental processes of a child learning his mother tongue claiming that is impossible to observe, psycholinguistic approach attempted to provide a description of the stages of language acquisition process.
Owing to Language Universals, Universal Grammar and LAD, the idea that human beings are biologically programmed for learning the first language improved and biolinguistics and neurolinguistics took over the further research on this issue. For example, neurolinguists developed the idea that learning is not only a biological process but also a neurological one, a matter of neuron activation. In addition, cross-linguistic studies brought many other evidences to light.

Starting from the generative “rule-governed” model of describing the child’s linguistic repertoire to Spolsky’s parallel distributing processing model or connectionism, which proposes that linguistic performance is a consequence of neural interconnections, psycholinguistic approach exhibited rigorous attempts to provide a description of the child’s language learning mechanism.

The studies of psycholinguistic approach on how an infant acquires language provide important information for other research areas. As it is also stated by Bhat” the findings and observations of psycholinguistic research have a significant impact in the areas of language teaching, speech therapy, stylistics and so on whose description is beyond the scope of this work” (1991:5).

Psycholinguistic approach has clarified the importance of the psychological reality of linguistic rules in language learning and acquisition.

In sum, it is the psycholinguistic approach that primarily forms the ways of language learning and developing learning and acquisition processes. It is a real problem identifier, problem solver, and a facilitator. It must be borne in mind that specifying and then solving the intrinsic difficulties in language learning, which is the prime occupation of the psycholinguistic approach, cannot be regarded as an easy task.

5. Psycholinguistic Approach and Four Skills

The relations of the psycholinguistic approach to ELT cannot be denied. Psycholinguistic research poses the following questions (Scovel 2002: 82): At which production stage is the language of the message is decided? How are the corresponding first language (L1) and second language (L2) words are related and why does code switching (both intentional and unintentionally) occur relatively frequently? And in what ways does our mother tongue interfere with the production of L2 speech? Why do we usually speak more slowly and hesitantly in a foreign language than in our mother tongue? How do speakers try to compensate for the gaps in their incomplete L2 system? By using the research background and research data from psycholinguistics on four skills of language learning, following views can be developed:

Psycholinguistic approach and the listening skill:

The psycholinguistic approach exerts usable influences in the field of listening. With the help of psycholinguistic knowledge, teachers can increase the interest and motivation of students, reduce the intrinsic difficulty of listening text and thus prepare them for the listening activity. In accordance with the instructions of the psycholinguistic approach, the intrinsic difficulty of a listening text
consists of the speed of the speech, number of the unknown words (amount of intake in one class hour), interaction between previously learned topics and the new topic to be learned. There are, in addition, extrinsic difficulties including interest, motivation of students, purpose of listening, and noise in the environment.

Psycholinguistic researchers have indicated that in teaching listening, the intrinsic and extrinsic difficulties should be overcome in order to reach to a highly qualified listening activity. For instance, a well-prepared listening text, consisting of 100 words, should include averagely 5-10 new vocabulary items from a text book at pre-intermediate level. Moreover, the teacher should make sure that the students are familiar with the topic treated in the upcoming text. The listening text, needless to say, should arouse the interest of the students. Again, it must be borne in mind that it is a psycholinguistically proven fact that the students should be positively motivated for the listening activity before, while and during the class period. The reading speed is an other listening related fact. Speed of speech in class is a serious factor, varying in degrees from elementary to an advanced level. The noise of the environment obviously affects the reading speed. Noise, an extrinsic difficulty, will surely affect the comprehension level of the students.

Psycholinguistic approach and the reading skill:

People read certain types of materials for different purposes. Skimming and scanning are, in fact, psycholinguistically oriented activities. Psycholinguistic approach resorts to text-based approach as a case of bottom-up processing so as to emphasize the comprehension activity. It also advocates the use of inside-the-head model (top-down processing) to stress the fact that comprehension rests primarily on student's knowledge base. So it can be said that reading skill is mainly meaning based activity as proven by the psycholinguistic approach. Psycholinguistic approach points to the fact that a psycholinguistic control on reading reduces the intrinsic difficulty of reading text by arousing the interest of the students onto the reading passage. It provides authentic materials so as to increase the reading level. It must be noticed that if the students are not properly exposed to authentic materials they may fail in seeing their relevance to the real world.

Psycholinguistic approach and the writing skill:

Psycholinguistic approach has a functional effect in the field of writing in accordance with the mistakes on graphic notation. Similarly, it has a clear contribution on spelling mistakes since in English words are not spelled as they sound there is a hardship on this case because storing of the spelling of words and retrieve them on demand is very difficult. As the psycholinguistic approach indicates there are also mistakes caused by agraphia, which must be treated properly. Psycholinguistic approach helps teachers to find interesting topics for writing activities. It also indicates, via a needs analysis, the importance of creating reasons for writing and finding topics that students have information about or the topics they want to write on. Such a conduct will also increase the motivation of the students who will
write willingly. Thus, the psycholinguistic approach serves to decrease the level of the difficulties in writing. It helps to specify the writing level and writing types. It pins down the mechanic mistakes on punctuation and suggests certain cures for them.

Psycholinguistic approach and the speaking skill:

Psycholinguistic approach has a workable control over the field of teaching speaking as a skill. It has specified several difficulties on speaking. For example, the student-oriented difficulties, environment dependent difficulties and situation related ones are just three of them. The difficulties caused by students themselves are speaking defects and personality factors (like introvert and extrovert students). Speaking defects like voice disorders, stuttering, and misarticulation are also psychological in origin caused by personality factors. There are also some traumatic disorders such as aphasia and autism caused by localized damage. It recommends therapies and counseling practices for such difficulties. Thus, the investigations of psycholinguistic approach have provided solutions for almost each type of language learning difficulty. Its importance especially in teacher training and the teaching of four language skills cannot be denied. It leads the foreign language teachers towards being reflective teachers.

6. Weak Points of the Psycholinguistic Approach

No approach is perfect. Needless to say, it is impossible to control all of the factors involved in the language learning and acquisition process. Owing to some border-line limitations among its related areas, psycholinguistic approach exhibits the following weak points:

The psycholinguistic approach disregards behaviorism too much. The behaviorist aspect of learning the first language cannot be stripped off completely since children are great imitators as specified by the imitation theory and reinforcement theory of behaviorism. Especially, the first stages of language acquisition have a great deal of surface imitation, as the infant has not developed enough categories to locate the input. As the time passes, children become poor imitators on deep structure.

In addition to imitation, the importance of the input in the child’s acquisition of language is undeniable. “Whatever one’s position is on the innateness of language, the speech that young children hear is primarily the speech heard in the home, and much of that speech is parental speech or the speech of older siblings” (Brown, 1994:40). Natural dimension of language acquisition is a must; however, also nurture has an indispensable role in language learning. The more nature supports nurture and nurture backs up nature, the more the psycholinguistic difficulties in language learning are mitigated.

According to the psycholinguistic approach, not the frequency but the complexity of words determines the items which are learned beforehand, but what about the role of the frequency of hearing and producing items while acquiring the first language? It is easy to observe children
practicing the language constantly. Therefore, the behavioristic claim that practice, repetition and association are the main sequence of gaining habits may work out in the early stages of language acquisition. Then, the job of psycholinguistics to explain the unknowns in language acquisition starts where the job of the behavioristic approach slows down.

In brief, the psycholinguistic approach is able enough to jot down the problems that come to the surface both in language acquisition and foreign language learning and then suggest some solution to the psycholinguistic difficulties in the learning process.

7. Contributions of Psycholinguistic Approach to ELT

The psycholinguistic approach is a problem-solving area in the language learning and teaching process. It has fundamental contributions to language and teaching pedagogy.

The psycholinguistic approach has provided the theoretical ground for the flourishing of many second language learning theories and methods. Mentalist and Rationalist, Cognitive-code theories of learning are the side-product of psycholinguistic view points in science and research. Besides, Cognitive-code theory which was propounded by Bruner and Miller, the Functionalist approaches to teaching foreign languages and Thorndikes's Connectivism are psycholinguistically based contributions to language teaching.

The psycholinguistic approach has improved the ways of teaching vocabulary items to foreign language learners. It defines the psycholinguistic difficulty elements in learning new words of a foreign language by focusing on the intrinsic difficulty of language structures and the effect of native tongue on newly learned vocabulary. By clarifying the problematic points in such cases, it suggests ways to indicate meaningfulness and familiarity between previously learned words word a new word. While teaching groups of words, the approach suggests ordering from easy to difficult, from known to unknown. Moreover, the existence of the primacy and recency effects in learning and teaching vocabulary items (Demirezen, 1981:188-191) was also pointed out for the first time by this approach.

By means of this approach the psychological factors affecting second language learning such as motivation, memory, explication, induction, difference between adults and children in second language learning and so on have been put forward (Steinberg, 1993:203-208). Therefore, other areas of research in this field were encouraged by this approach. For example, first language acquisition has received a great deal of impetus and feedback from the psycholinguistic approach, and in this way the riddles on the mother tongue interference are unearthed to a great extent by means re applications of Sapir-Whorf Hypothesis on second language acquisition. Similarly, the validity of L1 = L2 Hypothesis and the status of interim grammars and interlingual errors are being reconsidered today through the contributions furnished by the psycholinguistic approach. Also, the birth of Educational Linguistics, under the leadership of Bernard Spolsky, owes a lot to the psycholinguistic approach, which, by this way, has shaken the grounds pertaining to the scope of applied linguistics today.
With the notions provided by transformational generative grammar, both teachers and course book writers started to be more careful about selecting “patterns which were really analogous at the deep structure” while presenting the language items. Besides, with LAD the creative aspect of a language surfaced and gained importance in language classrooms (Rivers, 1981:77).

Owing to the Nativist period of psycholinguistic approach, it is realized by the researchers that children pass through a series of interim grammars. This approach sheds light onto the fact that foreign language learners also display similar characteristics and “the term interlanguage came into use to describe the kind of language a particular second language learners was using at a given time, that is the learner’s version of the new language....” And interlanguage differs from the native speaker’s way of using the language (Rivers, 1981:81).

Psycholinguistic approach provides ways to make grammar and vocabulary presentation more pedagogical. So, language teacher who is trained in psycholinguistics, and pedagogical presentation of the new material, “he will easily handle the psycholinguistic and psychological processes involved in language teaching” (Demirezen, 1989:181).

It has helped to predict the learner’s mistakes. It gave new directions to error analysis and contrastive analysis.

It also helped to the understanding of the nature of interlingual transfer, mistakes and errors, mother tongue interference, ambiguity, and hierarchy of difficulties in ELT by way of phonetic and phonemic analysis, morphemic and morphological evaluation, and syntactic, semantic and pragmatic evaluation.

It has served for the identification of psycholinguistic difficulties by giving certain ways of solution to them.

It is a great facilitator in establishing a productive learning environment and in using effective, pedagogical class activities.

8. Conclusion

By means of the psycholinguistic approach, it is understood that we, as human beings, are innately and biologically programmed to acquire the first language, second and third languages, which may also be learned, if the right learning atmosphere furnished by the psycholinguistic approach is provided. Therefore, it has furnished solid scientific ground for the validity of Chomsky’s, the neuro-psychologists’ and Krashen’s theories. Moreover, cognitive processes are regarded as the main starting point to provide a description of language acquisition stages. Therefore, with this approach, the unseen and abstract language operations to learn languages are tried to be unearthed and systematized. Since the scope of psycholinguistic approach is so pervasive, it unfolds many questions and disputes about language acquisition and learning. For example, it can give solutions to deeply seated psycholinguistic difficulties and ambiguities involved in foreign language teaching. Also, it can expound the weak status and validity of some approaches, as is the case with the natural approach, devised by S. Krashen, by pointing out that it disregards the socio-psychological issues in learning foreign languages.
The psycholinguistic approach covers many scientific fields such as cognitive psychology, behaviorism, psychology, applied psychology, linguistics, mentalism, nativism, biological linguistics, psycholinguistics, neurolinguistics, rationalism, etc. In addition, in the field of language teaching, psycholinguistic considerations have improved the ways of teaching skills in terms of cognitive, meta-cognitive, and socio-effective respects by giving their psycholinguistic difficulty levels and ambiguity phenomenon. As psycholinguistic considerations offer ways of teaching four basic skills including even teaching testing and vocabulary, the impact of this approach upon the teaching of four skills cannot be overlooked. In addition, psychological factors such as motivation, memory, learning styles, etc. have been clarified and regarded as crucial in learning a foreign language because of the contributions of the psycholinguistic approach. Thus, this approach has given rise, by showing the directions of negative activation of the mother tongue interferences, to the establishment of psycholinguistic methodology, to a teaching and learning language pedagogy, both in the field of first language and foreign language acquisition.

Kaynaklar
