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language which may arguably possess the complexities of a spoken language, and extensively correlate them with hearing-speaking adults who are matched for age, sex, and possibly socioeconomic and educational status.

Another very revealing study in this area could involve systematic categorization of the mentally-retarded individuals based on their sex, age, and types and degrees of mental disorder, carrying out repeated comparisons between their cognitive and language abilities. Other studies can also focus on the development course of language acquisition in children suffering from Down Synorome to find out that whether such a course is best characterized by delayed or atypical acquisition. It should also be investigated as to whether there is a particular pattern of strengths and weaknesses characteristic of the language acquired by such children.

It would also be of great benefit to systematically correlate those deaf-mute individuals who do possess a sign language with those who do not to see wether a sign language can foster higher degrees of cognition or intellectual capacity.

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The coefficient in the above table indicates that there is a cosiderably high degree of correspondence between the performances of normal and deaf-mute (non-singning) children on measures of general intelligence. The coefficient 81.3% is much higher than the rcritical which is 32% with the level of significance set at less than .01 for a directional test. This can be interpreted as evidence to support the existence of very similar degrees of intelligence in individuals who do or do not possess an overt liguistic system.

One interesting conclusion, here, would be to claim that lack of an overt linguistic system cannot possibly lead to much lower than aveage performance on tasks involving general intelligence. However, according to Vygotsky (1962), language is an essential means of development of higher mental functions through its abstract characteristics.

The findings of this study clearly contradict Vygotsky's view since deaf-mute individuals can exhibit very similar degrees of intelligence as compared to the hearing. At the same time, this conclusion can provide support for Piaget's(1926) view which proposes that language is neither necessary nor sufficient for the development of cognitive structures.

DISCUSSION

This study was primarily aimed at demonstrating that contemporary Psycho-linguistic frameworks, for the most part, have been established on shaky grounds since they have not authoritatively addrssed the most fundamental question of how the human mind reacts to language and which cognitive structures, if any, are affected or transformed through the abstract properties of language.

As an instance, it seems quite unlikely that the different areas of language such as lexis, syntax, or sounds could all affect the mind in the same manner, or the same mental processes would be called upon towards their assimilation, storage, and recall. Nevertheless, FL/SL teaching methodologies give the same treatment to all different components of language as if they were categories of the same exact nature.

Perhaps, the methods and instruments of research that are available today cannot satisfactorily deal with such a giant complex problem, and we have to await the introduction of brilliant scientific breakthroughs by which the mysteries of man's own mind can be probed and hopefully unlocked. Until such time, it is suggested that performing exhaustive correlations of the type carried out in this study can certainly contribute to the development of more valid theories by decisively showing the kind of relationship that exists between language and mind, and whether language can possibly interplay on-line with such mental processes as learning, rehearsing, or remembering.

SUGGESTIONS FOR FUTURE RESEACH

Although not easy, it would be possible to find deaf-mute adults in different age categories who do not use any systematic sign

a culture-fair international test called Raven's Colored Progressive Matrices (RCPM). This test consists of 36 questions in the form of two-dimensional visual patterns of graded complexity, out of which a smaller area has been taken out. This smaller area is presented to the subject, along with five other similar patterns as distractors. The test is very similar to a jigsaw puzzle, except that its colored patterns are mostly meaningless and pertain to geometric figures. The maximum score obtained, one point for each correct answer, is 36 which can be converted to either percentage or standard score through its conversion table.

RCPM is a measure of general intelligence whose administration requires almost no verbal explanation and is used for children in the age category of 5 1/2 - 9 1/2 and also for older retarded children. RCPM was administered to subjects individually. There is no time resriction for answering its questions. Kertesz(1989) reports that RCPM is a very reliable and widely used measure of general intelligence, and many recent studies in psychology and cognitive science have used it with normal as well as apasic children.

Procedure

As mentioned before, this study involved no treatment due to its objective which was achieved through an ex post facto correlationaldesign. All the 100 subjects were tested individually using RCPM. Two examples had been prepared before hand to clearly demonstrate the objective of the test to the participants. Time was not controlled for each item and the test started as soon as each subject fully understood the procedure to be followed and how to respond. Each correct answer received one point, and the score of each subject on the test was the total number of the correct responses which was later converted to percentage score.

The two sets of scores on RCPM obtained for the two groups of subjects 50 each were used in the Pearson product moment correlation coefficient formula to determine the magnitude and direction of any existing relationship between the performances of the two groups on RCPM.

FINDINGS

The correlation coefficient which indicates the degree of relatedness between the degree of relatedness between the performances of the two groups of subjects (50 normal, 50 deaf-mute) on the general intelligence measure called RCPM was obtained through the Pearson formula and is reported in the following Table 1.

Table 1. The correlation coefficient of the scores of normal and deaf-mute subjects on RCPM

Subjects		$r_{A,B}$ correlation
normal	deaf-mute	
50	50	81.3%

METHOD

Subjects

The subjects used in this study consisted of two groups of 50 male pre-school children in the age category of 5-6. The reason for selecting this specific age category was that the researcher could more easily have access to deaf-mute subjects who had not developed a systematic sign language.

The first group of the above subjects consisted of 50 male pre-school children who were normal in the sense that they had no hearing impairment, and all exhibited normal L1 development. The subjects attended the following pre-elementary schools and kindergartens: II subjects came from Sharaf, 8 from Parsa, 5 from Shayesteh, 7 from Omide Farda, 12 from Nonahalan, and 7 from Rastan. The first three are located in the city of Karaj, the fourth is in Gorgan, the fifth in Mashhad, and the last one is located in the city of Tehran, Shemiran District.

The second group of the subjects consisted of 50 male pre-school children who were born deaf-mute and did not use systematic signing. They had all been tested by specialists and clinically classified as totally deaf-mute. These subjects attended the following special centers: 18 subjects came from Pasdaran Complex, 9 from Yaftabad, 13 from Baghcheban Center Number Four, and 10 from Shahid mehrab pre-elementary school for the deaf-mute. All the above special centers are located in Tehran.

Materials

As briefly discussed earlier, since the concepts referred to as mind, thought, or cognition do not render themselves to quantification, this study uses intelligence as the concrete measure of an individual's general cognitive abilities in performing tasks that require intelligent behavior.

Intelligence, according to Wechsler(1958), is "the global aggregate capacity of an individual to think rationally, to act pur- posefully, and to deal effectively with his environment" (p.7). Hebb(1966) argues for two different types of intelligence. A: "The innate potential for cognitive development," and B: "A general level of development of ability to perceive, learn, solve problems, think, and adapt" (p. 332).

Cattell(1971) also makes an important distinction between two kinds of intelligence. He calls the first kind "fluid abilities" which are the basic non-verbal capabilities unaffected by culture or experience, such as measures of general reasoning, memory, attention span, and analysis of figures. The second kind is called "crystalized abilities" which is highly affected by culture and education. It primarily involves verbal measures of vocabulary knowledge, general information, and arithmatic skills. The first kind, as claimed by Horn and Donaldson(1980), is susceptible to age and reaches its peak by the age of 15, whereas the second kind tends to increase with age(cited in Lefrancois, 1991, p. 225).

The instrument used in this study as the subjects' measure of general intelligence was

area. The views presented so far can, perhaps, be summarized in a more orderly fashion as follows:

1. Language and cognitive development are two entirely independent phenomena.

2. Cognitive development percedes and is causally prior to language development.

3. Language development precedes and is causally prior to cognitive development.

4. Cognitive and language development draw upon the same underlying structures, thus move at the same pace and are perfectly correlated.

The four corollaries formulated above might not be all the possible alternatives concerning the relationship between the two variables in question, since one might also be concerned with the specific degrees and areas of development in either domain. It should, however, be mentioned in the passing that all the logically feasible combinations of the two variables have been advocated theoretically, and for the most part, without solid empirical evidence to support them.

One of the assumptions of this study is concerned with its design. No doubt, the most appropriate method of approaching a solution in the form of showing causality would be through an experimental study where one of the variables, language or cognitive development, might be designated as the independent one. One major problem here would be the choice of the independent variable which could go either way due to the lack of certainty and reliable evidence to support any one of the two as the most likely candidate causing the other one, supposing there is a cause-and-effect relationship at all. Another problem would be how to treat a group of subjects with measured doses of cognition or language in a tightly controlled environment and watch for any corresponding development in the pertinent area, supposing that development naturally taking place within individuals can somehow be stopped in its track.

Therefore, in view of the foregoing discussion, it can be safely argued that performing extensive correlations between minds that do and do not speak or possess an overt linguistic system such as the hearing and the deaf-mute could yield the crucial information illuminating the nature of the relationship and trigger the formulation of a defendable psycholiguistic framework as the most vital foundation of FL/SL teaching methodologies.

Another assumption of this study is that whatever is known and applied in the process of adult language learning is somehow derived from the insights achieved in the natural first language acquisition domain. After all, what else can inspire man in his scientific endeavors other than the natural phenomena that function so flawlessly and miraculously in his surroundings. Thus, the main task would be to gain a thorough appreciation of the said relationship in pre-school children who are going through the process of language and cognitive development.

position implies that language development should be commensurate with cognitive development. Further, it cannot exceed cognitive development. In other words, this point of view implies a nearly perfect correlation between language and cognitive development.

The Weak Cognitive Hypothesis presented by Cromer(1976) holds that cognitive developments are necessary and critical for language development but not sufficient in themselves to account for the development of language. Cromer suggests that cognitive development allows for the development of meaning content to be encoded by the child. However, skills specific to a linguistic system are necessary for the child to be able to express these meanings with language. Miller et al. (1977) points out that the weak form of the cognitive hypothesis implies that language development would be equal to or less than cognitive development.

The third constructivist viewpoint is the Correlational Hypothesis of Miller et al. (1977) which suggests that cognitive and linguistic development will be strongly related to one another. The reason for such a relationship is that they are both served by common underlying structures. Whenever a developmental change takes place in specific underlying structures or mechanisms, it may be observed in either the linguistic or the non-linguistic domain. Snyder(1988) claims that basic to this position is the Piagetian notion of the horizontal decalage in development. This concept refers to the time delay between the expression of an operation in one content domain before its expression in another.

Johnston(1988) places a somewhat greater emphasis on exploring the way that concepts and their attainment constrain and correlate with the acquisition of highly specific linguistic structures particularly spatial, locative, and dimensional terms. She stresses that one cannot simply look at the relationship between the way that conceptual knowledge constrains and affects the acquisition of language. Johnston concludes that, on the one hand, specific cognitive achievement may not be implied in the acquisition of all linguistic forms, e.g., elements of the auxiliary system, nor may cognitive operations be necessary and sufficient for the acquisition of specific liguistic structures. On the other hand, some linguistic forms clearly require prior conceptual knowledge which constrains their acquisition. Thus, there seem to be ralationships between some but not all aspects of language acquisition and specific cognitive development.

The ultimate question before us is how much of what is unique about the human mind is owed to language, and how does language, if at all, transform the mind. The preceding brief survey regarding the possible relationships between language and cognitive development is, by no means, exhaustive. Nevertheless, it depicts the utter fuzziness and reveals the state of indecision surrounding this

terized as if he were operating in the scientific method similar to logical deductive operations performed by a liguist, but unlike the scientist, the child enjoys an inside edge in the form of innate rule-discovery system.

The second is Roeper et al's(1981) Lexical Hypothsis where they propose a somewhat different approach based on the observation that children learn lexical items before learning the rules that affect them. The child learns a set of subcategorization frames associated with the lexical items. These frames characterize and restrict the types of syntactic relations where these items can enter. Consequently, as the child learns lexical items, he learns something about syntax as well. The lexicon becomes a vehicle which introduces the child to syntactic categories and frames; then he becomes very sensitive to those syntactic rules that change subcategorization frames.

Finally, Wexler and Culicover(1980) put forth the Learnability Hypothesis which proposes that the child's learning of language, particularly syntax, can only be explained by making an appeal to the effect of specific linguistic constraints. Although they focus their discussion on specific syntactic principles, they extend their consideration to semantic constraints as well. They suggest that the child uses these principles in learning language, and such principles ultimately are what make a language "learnable". They do concede that these liguistic constraints may well be cases of more general cognitive constraints which have not been well-formalized or specified as yet, and there is a lack of evidence to support this claim.

Constructivist Hypothesis proposes that the child is an active processor whose knowledge of the world serves as an interactive source for his hypotheses about language. The child applies these schemes, sensori-motor or mental, to the environment and incorporates or assimilates that information. Or, the environment may give the child information which prompts the child to change his schemes. The give and take of this continuous interaction is the mechanisms of the child's cognitive development. The gradual emergence of the structures of formal operational thought is the result of this process. Thus, the constructivist viewpoint suggests that the child's cognitive development is, in an important way, related to the hypotheses that the child will formulate about language. Again, there seem to be three major types of constructivist hypotheses.

First is the Strong Cognitive Hypothesis by Miller et al. (1977) which suggests that the development of specific cognitive factors is sufficient to account for the child's ability to apprehend and learn language. Here, the notion of cognitive prerequisites presupposes that the non-verbal cognitive skill precedes the acquisition of its corresponding liguistic skill. However, it is very difficult to reliably determine productive instances of liguistic skills and decide which non-verbal cognitive skills predict and are truly prerequisite for the attainment of specific linguistic skills. Such a

position regarding language as being neither necessary nor sufficient for cognitive development is with respect to the earlier stages (pre-operational thought and concrete operations); yet, he acknowledges that in the higher stages (formal operations) language **may be** necessary, at least for some forms of reasoning which require operating on symbolic forms.

In contrast, according to Vygotsky(1962, 1978, 1981), there are constant interactions between language development and cognitive development, such that thought is neither autonomous from language nor causally prior to it. The basic tenets to his theory, as pointed out by Luria(1976) and Wertsch(1985, b), are that speech is social in origin and that language precedes rational thought and influences the nature of thinking. The uses of a sign system, such as language, are necessary for the development of uniquely human higher mental functions both in ontogenesis and in phylogenesis. This view gives rise to the general explanatory principle of "semiotic mediation" where the properties and uses of sign systems, especially language, lead to new forms of organization in development. Vygotsky(1962) considers language as a very special tool which transforms the sensori-motor activity by mediating the means-endsorganization. For him, thought is mediated by inner speech, i.e., its development is initially the result of internalizing a new kind of means-ends organization imposed by speech that transforms the organization of all activities.

In recent conceptualizations of the problem, there seems to be three major philosophical positions: constructivist, nativist, and behaviorist theories of language development. These views differ in where they place the source of the child's language learning ability and the mechanisms by which this language acquisition takes place. In recent years, however, the debate has been developed by and restricted to the nativist and constructivist camps. Undoubtedly, the behaviorists' inability to adequately respond to the concerns leveled by nativists and constructivists in the early 1970s has led to their recent lack of theoretical and empirical visibility on this question. Among the vast array of existing viewpoints regarding this issue, three of them may be classified as the current nativist approaches.

First to qualify is Valian and Caplan's(1979) Little Liguist Hypothsis which is highly consistent with Chomsky's nativist tradition. Essentially, they propose that the child learns a transformational grammar containing both phrase structure rules and transformational rules. The child is taken to possess some innate organizing principles that stand for the common denominator in all languages, the linguistic universals. They suggest that the hypotheses formulated by the child are candidate phrase structure and transformational rules which the child then tests against the available evidence. Considering the degree of fit between the rule and the data, he may retain or discard the rule. Therefore, he is charac-

Chomsky (1965, 1975, 1980) whose nativist view regards language as a specific faculty of man's mind, uniquely different from other mental faculties. He asserts that cognitive mechanisms could never account for the development of the highly structural rules specific to language and that language is sufficiently rich in structure that viable parallels to its structurally dependent rules do not exist in other domains.

On the question of modularity, one can ask whether children learn language using a distinct "mental organ" whose principles of organization are not shared with other cognitive systems such as perception, motor control, or reasoning (Chomsky, 1975, 1986; Fodor, 1983), or whether language acquisition is just another problem to be solved by general intelligence, in this case, the problem of how to communicate with other humans over an auditory channel (Minsky, 1975; Anderson, 1983). Is language simply grafted on top of cognition as a way of sticking communicable labels onto thoughts (Fodor, 1975; Piaget, 1926)? Or does learning a language somehow mean learning to think in that language?

The classical accounts with in developmental psychology concerning the origins of language and thought are those of Piaget(1926, 1955) and Vygotsky(1962, 1986). Their theories are often presented as mutually contradictory points of view. Their perspectives can be compared and contrasted by viewing the role of knowledge as a represetational system. Piaget focuses on the child's cognitive development, which he describes as resulting from the internalization of the means-ends organization of sensori-motor activities achieved in early development. Thus, the first cognitive representations are described as internal imitations of external action.

Kohlberg and Wersch(1987) point out that in Piaget's development theory language plays a relatively peripheral role both as a content area in its own right, although he may have later applied his concepts to study language development, and as the principle explanatory mechanisms from which cognitive development emerges.

Hickmann(1988) states that according to Piagetian school, children's use of language is merely one among many behaviors following from principles of organization and mechanisms of development which are themselves autonomous. For Piaget, cognitive development is in principle both autonomous from language development and causally prior to it. Nevertheless, Piaget has, occasionally, recognized the importance of language acquisition for cognitive development. The role of language appears particularly in dicussions about the development of the symbolic function which characterizes the uses of all signs, including the early imitations of actions (iconic sign) and later uses of language.

In Piagetian terms, although linguistic signs are described as having particular properties, their uses are but one type among sign-uses in the symbolic function, and they do not play a central role in development. Piaget's(1964)

the latter?

Butterworth and Grover(1989) suggest that one approach to complex processes such as language and thought is to observe how they develop. This so called "genetic method" raises the question of the origins of thought and language. In this regard, Garton(1995) believes that there are two sources of knowledge be it verbal or otherwise. It is either biologically determined or it derives from social origins. This dichotomy is often characterized as the nature/nurture debate whereby the development of knowledge is regarded as stemming either from innate pre-set capacities or, alternatively, from experience that regulates the development of the mind through the provision of stimulation for knowledge to grow.

Both poles in the debate have presented theoretical positions in the study of the development of language and cognition. In the innate views of development, emphasis tends to be on the "product" of that development, whereas in the social and cultural origins of knowledge, emphasis tends to be on the "process" of development. In both areas, the origins of cognitive and linguistic knowledge have been probed by empiricists as well as theoreticians. In the former, the focus has been on the end result, while in the latter, it has been on the environmental or contextual conditions that facilitate the process of development.

Elliot(1994) points out that it has been a tenet of much contemporary liguistics that language can be conceived of as a body of knowledge separable from other aspects of intelligence. He argues that claims about the autonomy of language can be investigated from the viewpoint of continuity VS. discontinuity throughout the process of development. The main point of the contention, he stresses, is where language comes from. Does it appear from nowhere, or does it have roots in the child's prelinguistic experience that could explain its emergence and development?

On the one hand, based on the continuity approach, the claim is that language development is merely an extension of the child's early skill at communicating and its precursors lie in his non-linguistic knowledge and cognition. This line of argument seriously shakes the foundation of the autonomous position where language and cognition are considered as two discrete phenomena. On the other hand, based on the discontinuity view, language can be given a special compartmentalized treatment with no origin in the child's accumulated experience. Thus, development could be seen as a series of steps, each one qualitatively different from the one before, rather than a smooth scale of increasing knowledge or ability; "... language may or may not have identifiable roots in non-linguistic experience, but once the child begins to learn to talk, his intellectual and social abilities are modified in such a way as to bring language and thought much closer to each other later in life" (Elliot, 1994, p. 27).

A prominent contemporary theory addressing development has been put forth by

duality of language and mind by regarding language as a special sort of intelligence (g factor) and maintains that, by definition, they are inseparable. It is worth mentioning here that researchers investigating in this area have not even agreed upon a unique terminology and the pertinent literature is full of such cover terms as mind, thought, cognition, intelligence, knowledge structure, mental faculty, and a wealth of others which are cross-cutting and overlapping. Intelligence seems to be the one which most readily renders itself to quantification and operational definition. Many psychologists argue that any central process that underlies behavior such definition. Many psychologists argue that any central process that underlies behavior definition. Many psychologists argue that any central process that underlies behavior as attention, discrimination, analogy, memory, ideation, language, deduction, logic, or problem solving is intelligence.

Kertesz(1989) informs us of the consensus among most philosophers on the role of thought as a precursor to language, but language as not representing the essence of thought. He maintains, however, that without language the retention of thought, the easy recall of thought, the interweaving of thought into higher complexity, and the communication of thought are all greatly limited. He concludes that language modifies and shapes our thinking process in a very significant fashion. This could mean that those deaf-mute individuals who do not possess a systematic sign language would be incapable of performing the aforementioned mental functions. Such a position seems to be reminiscent of the view put forth by Sapir (1921), and whorf(1956) who proposed that language is not merely a means of conveying ideas but rather functions as an instrument for shaping ideas.

Bisiach(1989) reports that review of the recent clinical investigations have resulted in two independent, but interrelated claims: (1) cognitive representations have analogue properties; (2) language does not qualify as an autonomous representational system. In other words, the second claim denies intrinsic representational competence outside those structures which, by virtue of their analogue properties, detain the actual thought database. Language can only operate with these structures on-line; it remains silent if not fed by them and malfunctions in a passive, uncontrolled fashion if misled.

There are two open questions begging the formulation of comprehensive and defendable answers. They are stated as follows:

A. Does language merely constitute an instrument for the communication of thought? Assuming that this is not the case and that language interplays on-line with non-linguistic phases of thought or general intelligence, how crucial is its role? What kind of cognitive skills, lacking in non-verbal thought, might it contribute?

B. Has language reverberated through developmental stages on thought, thus determining lasting changes in the structure of

Again, choosing a desirable strategy or some sort of a combination out of the list is perhaps a matter of luck and easier said than done. Mounting frustration has even prompted some authorities to strongly call for the total abandonment of all FL/SL teaching methodologies (Kumaravadivelu, 1994).

One reason for such a perplexity overshadowing the "what" and "how" of teaching stems from our inadequate understanding of the ways in which man's mind reacts to the properties and structures of language and vice versa. As hinted upon earlier, a powerful psycholinguistic framework should scientifically and authoritatively describe and explain the complex nature of all the mental functions that participate in and support the process of language acquisition. Doing so requires thorough insights into the phenomena of mind and language neither of which has been accomplished so far.

Consequently, theorists have suggested many partial solutions based on datadriven speculations without seeing the whole picture. Moreover, such partial views of the problem have been optimistically and often quite naively adopted by applied linguists as the whole truth into which syllabus designers and methodology/materials developers have molded their pedagogic products. This has led to a pendulous movement where methods and materials have been forced out of fashion as quickly as they have come into vogue. The enthusiasm of FL educators over discovering the key which has promised to unlock all the mysteries of language learning has raged for a while and then fizzled out in bitter disappointment.

It takes a great deal of scientific courage on the part of the theorists to admit their failures of the past decades and start making reconsiderations, instead they have chosen to bury their heads in the sand and have set out to make wild claims and srongly reject every other existing perspectives. The following brief review can undoubtedly attest to the disheartening chaos which has dominated the psycholinguistic foundation of FL education.

The debate is by no means a new one and has been around for centuries. There are two philosophical camps: on the one hand, the dualists regarding language and thought as being two separate entities, including Bergson, Berkeley, Schopenhauer, Binet, Piaget; and, on the other, the monists, believing in the unity of language and thought, having such notables as Plato, Leibnitz, J. S. Mills, and Ribot.

The Platonic school of thought holds that language principles are immutable and unaffected by man's mental structures. By contrast, Aristotelians argue that such principles are affected and defined by the constraints or limitations of the organisms that must utilize them. Such uncompromising and extreme positions are still being reflected in our contemporary literature.

Gazzaniga(1989) points to a further complication in the basic issue of unity or

The issue that most urgently and crucially concerns FL educators all around is whether the methodology they have invested in will deliver on its promises and efficiently promote the most desirable learning objectives so desparately sought. No single FL teaching methodology, to date, has been able to tell the whole truth and provide a solid footing and sound guidelines for a smooth and enjoyable journey towards the ultimate success.

The witness one can easily call upon to testify to the truth value of the foregoing statement is the amazing number of admittedly attractive and quite convincing FL teaching packages including methods, materials, and guides which have poured out of the most prestigious Western publishing houses during the last century. FL teachers have been bombarded by a barrage of fantastic approaches laying claim to the final state of the art and a breakthrough in language education. There are fashionable texts and materials loaded with eye-catching colored pictures printed on top-quality gloss paper. Some advocate grammatical topic orientation, some situational, and yet others functional. Some have adhered to gradation determined by language frequency, some to degree of difficulty, and yet there are those who do not consider it wise to sacrifice authenticity at the price of gradation. Some believe in highly controlled hand-composed texts; whereas, others introduce culturally-loaded materials regardless of the confusion involved. Some propose that materials should be suggested by the learners, some believe in no textbooks what so ever, and still there are those who go as far as taking cut-outs of magazines and newspapers to classrooms to be served directly.

The shelves of this supermarket are stacked with an astonishing assortment of materials to satisfy every taste and fulfill every wish. All one has to do is to try one and if it does not prove to perform miracles as promised, try another one, and keep trying without frustration in hopes of hitting upon the appropriate package. After all, there is nothing to be lost through this sort of trial-and-error pedagogic game, is there?

So much for the materials department of the past century turning state of the art into state of confusion. Unfortunately, things are no better off in the methodology arena. We are blessed with exquisite metaphores such as deduction, process orientation, desuggestion, holistic skills, teacher-centered, rule formation, whole-person, pattern drills, induction, isolated subskills, sense of plausibility, meaningful communication, product preoccupation, learner-centered, information gap, rotation, affective filter, autonomy, awareness raising, natural approach, musical approach, silent approach, family approach, army approach, physical approach, mental approach, habit-formation approach, science fiction approach, no approach, and the list goes on defying exhaustion.

Does Language Interplay on-line with Non-linguistic Phases of Thought? An Empirical Study

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All pedagogic systems, since they address some type of human learning, must necessarily draw upon well-grounded psychological guidelines and FL pedagogy is no exception. No psycholiguistic framework can possibly qualify as the foundation of an FL teaching methodology unless it can adequately explain the nature of interrelationships in many areas between language and mind including the most fundamental question of autonomy and/or causal priority. To date, there has been no consensus among theorists on a single coherent perspective in this regard which has led to the development of a host of FL methodologies and ready-made packages making unrealistic and unwarranted claims, and causing persistent bewilderment in FL education circles worldwide. This article which is aimed at shedding some light on the foregoing relationship reports on a correlational study performed on two groups of subjects. The first group consisted of 50 pre-school non-signing deaf-mute boys (5-6) who had been clinically categorized as totally deaf due to congenital disorders. The second group consisted of 50 pre-school hearing boys(5-6). Both groups were tested on a general intelligence measure (g factor) called Raven's Colored Progressive Matrices (RCPM). The result of this study which was a considerably high coefficient of correlation between the two groups suggests that absence of an overt linguistic system does not necessarily lead to corresponding degrees of malperformance on tasks involving intelligent behavior.