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Neurobiological Perspectives in Communication through Second Language.

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ABSTRACT

Researches in English language teaching examine the learners in all their aspects to help teachers to explore the teaching beliefs in formal classrooms. The past two decades have stood witness to the researches in the field of communicative language teaching and their changing perspectives. This article analyses the present neurobiological perspectives in English as second language acquisition; how the oral communication of second language learners gets affected by the negative feelings associated with anxiety and fear of losing self-image and what best an ESL teacher can do to facilitate their oral communication in English.

Keywords: Researches, teaching beliefs, neurobiological perspectives, second language acquisition, communication

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INTRODUCTION

English language teaching has experienced a paradigm shift over the years with innovative thinking and the researches carried on in the outer circle countries where English is taught as second language and in expanding circle nations where English is taught as a foreign language. Language learning itself is seen as a behaviour science with its affinity to habit formation process; Gardner (1985)[1], Lambert (1974) [2] have recorded the influence of social psychology in motivating the members of certain linguistic groups to learn a second language or prevent them from doing so. Of late applied linguists have started viewing L2 acquisition not as an independent construct but as a continuum and also examine it from a neurobiological perspective. In doing so, they look at motivation, language anxiety, identity seeking, risk taking, and egoistic emotional aptitudes and attitudes as manifestation of neurobiological affective or conative functions which hinder or accelerate second language acquisition in general and oral communication in particular. Language learning needs motivation to learn, cognitive ability to retain and recall, and at the end to relate and to be shrewd enough to express to the context and participants.

Neurobiological perspectives

John Schumann (1998, 1999) [3], [4] was the first of the sort to initiate the language researches to incorporate the neuroscience into the domain of cognitive science and applying them to the study of applied linguistics. His theory of 'stimulus appraisal,' holds that a stimulus occurs in the human brain along five dimensions. "They are novelty,(degree of expectedness/ familiarity), pleasantness(attractiveness), goal/ need significance (whether the stimulus is instrumental in satisfying the needs or achieving goals, coping potential (whether the individual expects to be able to cope with the event ; and self and social image (whether the event is compatible with social norms and the individual's self- concept)" Dornyei (2001:46) [5]. He further says these appraisals become part of a person's overall value system through a special 'memory for value' and are largely responsible for providing the affective foundation for human action. He has built up his motivation theory on the five dimensions of stimulus Schumann has introduced.

Motivation

Dornyei (2000) [6] is quite vociferous about the neural approach as he deliberates about the temporal aspect of motivation which he considers useful for the researchers to analyse the choice motivation that decides the selection of goals and desire even in the pre-action stage and the volitional or executive factors that take shape during the action phase and usually affect the on-going learning behaviour. The educational psychologists like Snow, Corno, and Jackson, (1996) [7] have fully understood the significance of the evolution of motivation in its different aspects and the impact it has on an individual's language learning system. However, a learner can control such affective foundation of the learning process by his or her conscious efforts.

Anything new or different from the existing always has a fascination, no wonder anything out of the way and extra ordinary appeals to human brain and the person decides to pursue what he or she desires to do; this the foundation for the motivation theory called, self-determination theory: when a person learns a second language for the happiness of learning and enjoying it, it becomes intrinsic motivation i.e. controlled from within. When a person is motivated to learn a language to earn a good salary or an award, it becomes extrinsic motivation, i.e. controlled from outside; Seyhan (2000) [8] identified students, who demonstrated positive attitude towards American culture, demonstrated higher motivation levels and greater efforts in their work. They exhibited the positive side of integrative motivation; they could communicate well in the second language because of their interest in the target language community and intense desire to get integrated into it. Thus it is evident the intensity of the motivation depends upon how well the notion gets internalised in one's brain; furthermore, the intensity of the trio of motivations shape the learners' foreign language aptitude that they learn to communicate defying such factors as time and space in second language learning.

Anxiety and self-image

Adult learners of second language have a pre conceived notion of self-image which makes them apprehensive of their coping potential to meet a given situation for example an academic presentation or an interview. Such thinking brings a great amount of anxiety to the learner. Spielberger (1983) [9] defined

anxiety as subjective feeling or tension, apprehension, nervousness and worry associated with an arousal of the automatic nervous system. Horwitz, and Cope (1986) [10] identified a new dimensional anxiety which they called foreign language anxiety that was situation specific and was responsible for adult students' negative emotional reactions to language learning; in their view, it stems from the inherent inauthenticity associated with immature second language communicative abilities.

Seyhan (2000) [8] reports one such instance: she had conducted a study to identify the impact of anxiety and self-esteem on the oral communication of German and Japanese adult ESL students in a university based language school located in Southern California. The study found that all students experienced anxiety from anticipated mistakes in oral communication; because of anxiety, both the groups were unable to participate in discussions and lacked concentration and furthermore, interestingly, both the group members avoided direct eye contact with the teacher, signifying their lack of self-confidence.

Anxious speakers in communication classrooms have performance anxiety, because they not only have to learn second language but perform it as well. When they have to perform in the presence of native speakers or more knowledgeable peers and teachers they feel embarrassed and stammer in fear and shyness; they turn reticent with a lot of sweating and shivering- the biological externalisation of fear and shame experienced on account of the negative emotions at the thought of incompetence felt in the brain. Quoting Trosset (1986) [11] Hilles and Sutton (2001) [12] say adult learners experience not only a sense of inadequacy but also fear of failure as well as fear of success, all of which seem to be intimately associated with feelings of shame. They further elaborate by quoting Schumann (1997) [13] who perceives language performance of human beings as closely associated with the manifestation of body's inner cognitive, psychological or neural mechanism, "shame experiences generate cortisol in the body, which interferes with cognition" (p.155). The language anxiety seems to be part of only adults' language learning system and younger learners with their risk taking attitude and not considering self and social image as adults, mostly keep themselves away from such anxieties.

Cognition and speaking

Levelt (1989) [14] identifies conceptualization, formulation, and articulation as the three major processes involved in speech production. During the conceptualization or preverbal stage, the speaker decides what message to convey. In the formulation stage, the speaker converts that message into linguistic form: planning, selecting appropriate words, putting these words in the correct order, and adhering to grammatical rules. In the articulation stage, the speaker verbalizes the message while self-monitoring and adjusting body language. Speech often includes silent pauses and or pauses filled with linguistic resources such as "umm". Those unfilled and filled pauses are evidence of syntactic and semantic speech planning which again is part of the speaker's cognitive ability to recall and relate the vocabulary and appropriate grammatical structure from memory. This language behaviour is part of any speaking activity, whether it is interpersonal communication or academic language functions such as discussions and presentations.

Teacher's role in helping adult learners to communicate

Creating conversation groups among students (Dobson 2005) [15] is a first step to motivate the students to speak. Speaking activities like role plays which are pair and group tasks will throw opportunities for the students to speak. Since role plays are considered to be effective communication enhancement tools, situational role plays can be administered to students. The author has made a study in this regard. With engineering students as participants, the ability of role play as communication enhancement tool was tested. The pilot study made prior to the action research had identified language anxiety, fear and shyness as affective factors preventing students from speaking in front of their teachers and peers. Despite the teacher's elaborate introduction and explanation, the students were quite hesitant to participate in role plays. However, the students were ready to take part in role plays, when they listened to a CD [16] modelling interpersonal communication. The audio CD [16] describing a pen-drive could motivate the students to describe an instrument; thus, their academic language function skills were also encouraged and groomed to overcome language anxieties. Authentic video has been shown, to inspire self-confidence and, as a result, students exposed to it report feeling fewer inhibitions about using their second language (Terrell,1993) [17]; they

produce comprehensible output taking clue from the language input samples from the native speakers (Weyers, 1999)[18].

Dobson (2005) [15] describes the biological features of the students who are afraid and shy to speak in second language. Usually these students are reticent and are passive observers of classroom activities. She continues, "Quite often they are afraid of losing face by making mistakes in English"(p.12). These students should be motivated with such saying as that we are susceptible to make mistakes and that we learn from our mistakes. "The teacher as conversation leader is to draw out the shy ones and to quiet the overly talkative ones giving each individual a fair share of conversation time... Out of fear the students' minds go blank, in such situations the teacher needs to step in to prompt the student or direct him in some way that allows him to recover gracefully and continue speaking"(ibid p. 12). When one makes mistakes, the flow of conversation should not be interrupted; rather the teacher may discuss such mistakes and valid grammar points without mentioning the name of the student in the feedback and evaluation session of the classroom procedure.

As Schmidt (1990) [19] opined, from cognitive perspective, the teacher must instruct the learners to focus their attention on a given topic so as to internalise the process of conceptualization. The teacher must encourage students to take risks and to manipulate the available language without being afraid of making errors (Faerch & Kasper 1986 [20]; Yule & Tarone, 1990) [21]. By providing models that demonstrate communicative procedures, in the form of audios and videos the teacher gives an opportunity to learners to identify the strategies used by the native speakers or other more knowledgeable L2 speakers. Such example based learning will induce oral performance of the reluctant and passive learners who have watched and stored the language behaviour in their brain. Finally, to prevent inhibitions in academic activities, the teacher should provide task based language activities with a focus on the topic in hand. Such procedure will help the students to conceptualise the topic and formulate the process before they articulate. Articulation is the automatic final stage in communication and more so for academic purpose. Kellerman (1991) [22] acknowledges the usefulness of such strategies as classroom practice to help learners overcome inhibitions while speaking for academic functions in the second language.

CONCLUSION

Schumann (1997) [23] opines all ESL learners are on individual affective and cognitive trajectories because cognition and affect are interconnected, and this idea has almost shaped the linguistic notion of the applied linguists of our times. Given to these cognitive interference Hilles and Sutton advise the ESL teachers not to demand from their adult learners the unreasonable goal of native like proficiency; they suggest given to the psychological and cultural domain the ESL learners are placed, the ESL teachers need to have warmth, compassion, empathy, and kindness along with a keen ability to observe and respond to the needs of their wards.

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