Abstract:

In the context of teaching vocabulary of English as Foreign Language (EFL), the confluence of memory and retention is one of the most significant factors in students' language acquisition. The progress of students engaged in foreign language acquisition is often stymied by vocabulary attrition which leads to learners' lack of confidence and motivation. However, among other factors, little research has investigated the importance of neuroplasticity in Foreign Language acquisition, and how under-stimulated brain loses plasticity because neural paths are underused which results in learner forgetfulness and lack of motivation. This research explored the effect of enhancing vocabulary acquisition of EFL students in the Foundation Year at King Abdulaziz University through various methods and neuroplasticity exercises that reinforced their attention, motivation and engagement. It analyzed the results to determine if stimulating the brain of EFL learners by various physical and mental activities led to the improvement in short and long term memory in vocabulary retention. The main data collection methods were student surveys, assessment records of teacher, student achievement test results, and students' follow-up interviews. A key implication of this research is for the institutions to consider having multiple varieties of student activities promoting brain plasticity within the classrooms as an effective tool for foreign language acquisition. Building awareness among the faculty and adapting the curriculum to include activities that promote brain plasticity ensure an enhanced learning environment and effective language acquisition in EFL classrooms.

**Keywords:** Language Acquisition, Neural Paths, Neuroplasticity, Vocabulary Attrition