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## **List of Abbreviations**

- ☐ ABRM = Auditory Backward Recognition Masking.
- ☐ AC = Adenylate Cyclase.
- ☐ ADHD= Attention Deficit Hyperactivity Disorder.
- ☐ AMPAR =  $\alpha$ -Amino-3-Hydroxy-5-Methyl-4-Isoxazole  
Propionic Acid Receptor.
- ☐ BDNF = Brain Derived Neurotrophic Factor.
- ☐ CaMKII = Calcium/Calmo Protein Kinase Type II.
- ☐ CAMP = Cyclic Adenosine Monophosphate.
- ☐ CAPD= Central Auditory Processing Disorder.
- ☐ CER = Conditioned Emotional Response.
- ☐ CR = Conditioned Response.
- ☐ CREB = CAMP-Responsive Element Binding Protein.
- ☐ CS= Conditioned Stimulus.
- ☐ CTOPP = Comprehensive Test of Phonological Processing.
- ☐ DM = Declarative Memory.
- ☐ EEG=Electroencephalography.
- ☐ E-LTP = Early Phase Long-Term Potentiation.
- ☐ ERP = Event-Related Potentials.
- ☐ fMRI =Functional Magenitic Resonance Imaging.
- ☐ GFP = Green Fluorescence Protein.
- ☐ ID = Iron Deficiency.
- ☐ IQ= Intelligence Quotient.

## *List of Abbreviations*

- ISI = Interstimulus Interval.
- LDs = Learning Disabilities.
- L-LTP = Late Phase LTP.
- LTD = Long-Term Depression.
- LTM = Long-Term Memory.
- LTP = Long-Term Potentiation.
- MAPK = Mitogen-Activated Protein kinase.
- MEG=Myelo Electrogram.
- MLD = Masking Level Difference.
- MMN =Mismatch Negativity.
- MOG = Middle Occipital Gyrus.
- MTL = Medial Temporal Lobe.
- NDM = Nondeclarative Memory.
- NMDA= N-Methyl-D-Aspartate.
- NMDAR = N-Methyl-D-Aspartate Receptor.
- PFC = Prefrontal Cortex.
- PKA = Protein Kinase A.
- PKC = Protein Kinase C.
- PKM = Protein Kinase M.
- PKM $\zeta$  = Protein kinase M Zeta.
- PL = Phonological Loop.
- Precursor peptide = pro.
- RA= Reading Achievement.
- SAS = Supervisory Attentional System.

## *List of Abbreviations*

- ☐ SM = Sensory memory.
- ☐ SPIN = Speech-Intelligibility-In-Noise.
- ☐ STM = Short-Term Memory.
- ☐ STS =Superior Temporal Sulcus.
- ☐ UR = Unconditioned Response.
- ☐ US = Unconditioned Stimulus.
- ☐ VSSTM = Visuo-Spatial Short-Term Memory.
- ☐ VSTM = Verbal Short-Term Memory Measures.
- ☐ VSTM = Visual Short-Term Memory.
- ☐ VWM = Working Memory Measures.
- ☐ WM= Working Memory.
- ☐ WMTB-C = Working Memory Test Battery for Children.

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# Introduction

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# **Aim of the Work**

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# **Neuroanatomy of Memory and Learning**

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# **Physiology of Memory and Learning**

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# **Types of Memory**

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# **Types of Learning**

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# **Pathophysiological Correlate between Memory and Learning**

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# **Memory Deficits in Learning Disability Children**

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# **Assessment of Memory Deficits in Learning Disability**

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