Effect of Achievement Motivation on Language Task Performance of Learners with ADHD

A dissertation submitted to the University of Hyderabad in partial fulfilment of the requirements for the award of the degree of

Master of Philosophy

In

English Language Studies

By

Krithika Nambiar

Supervisor

Dr. Joy Anuradha

Centre for English Language Studies

School of Humanities

University of Hyderabad

Hyderabad-500046

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CERTIFICATE

This is to certify that the dissertation entitled **"Effect of Achievement Motivation on Language Task Performance of Learners with ADHD"** submitted by Ms. **Krithika Nambiar,** bearing Regd.No.17HGHL01, in partial fulfilment of the requirements for the award of the degree of Mater of Philosophy in English Language Studies, is a bona fide work carried out by her under my supervision and guidance that is a plagiarism free dissertation.

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Hyderabad

June 2019

Dr. Joy Anuradha

Supervisor

Head

CELS

Dean

School of Humanities

DECLARATION

I, Krithika Nambiar, hereby declare that this dissertation entitled "Effect of Achievement Motivation on Language Task Performance of Learners with ADHD", submitted to the University of Hyderabad in partial fulfilment of the requirements for the award of the degree of Master of Philosophy in English Language Studies is a record work done by me under the guidance and supervision of Dr. Joy Anuradha, Centre for English Language Studies, School of Humanities, University of Hyderabad. It is a bona fide research work done which is also free from plagiarism. I hereby agree that my dissertation can be deposited in Shodganga/INFLIBNET.

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ABSTRACT

The educational system in India has undergone several improvements over the years, giving rise to better educational facilities and opportunities for all. Though there is an overall improvement in general educational standards, inclusive education, especially in the case of differently abled learners, remains an area for revamping. Teaching and learning approaches and materials specific to the ability, behaviour and mental requisites of learners should be preferred in classrooms with such learners. There are a few studies done on differently abled learners which show how appropriate educational approaches can significantly improve their academic performance. This study tries to understand how Achievement Motivation effects ADHD learners in their Language Task Performance in an Indian classroom.

The objective of the study is to understand how Achievement Motivation plays a role in Language Task Performances of learners diagnosed with ADHD. It also looks at the effect of Achievement Motivation in Language Task Performance of ADHD and non-ADHD learners and also sees if there's any correlation between Achievement Motivation and Langauge Task Performance across learner groups.

Five ADHD learners and five non-ADHD learners of the age group of 7-9 years were selected from the schools in Hyderabad for the study. The study follows a quasi-experimental pre-test-post-test design with an intervention between the two tests. The tests were first conducted for the ADHD learners and then repeated with non-ADHD learners. In between the two tests, there is an Enhanced Achievement Motivation Period in which the learners were motivated by the language teacher. The data was collected from the teachers based on the learners' performance on the language tasks. Throughout this period, the researcher observed the learners' performance and maintained a diary.

The researcher did a statistical analysis of the test results. The test scores of both the ADHD and the non-ADHD groups were calculated and the pre-test and post-test scores were compared and contrasted. The data was analysed, and the means and modes of the scales were tabulated and graphed. The results were supported by the observations of the researcher. The final correlation study between Achievement Motivation and Language Task Performance was analysed using the Pearson Correlation Coefficient test.

The results of the study indicate a strong association between Achievement Motivation and Language Task Performance of learners. After the implementation of Enhanced Achievement Motivation Period, a statistically significant difference was found in the Likert Score analysis and MANOVA results for both ADHD and non-ADHD learners in their levels of achievement motivation and their language task performance. Overall results for ADHD learners showed, achievement motivation levels improved by 18.7% and language task performance levels improved by 35.57% with positive feedback. The results for non-ADHD learners showed improvement in achievement motivation levels by 9.3% and language task performance levels by 15.28% with similar positive feedback. This study showed a moderate uphill (Positive) correlation between Achievement Motivation and Language Task Performance with correlation value $r = 0.4$.

Despite a smaller sample size, the findings imply the importance of achievement motivation across all learner groups. The outcomes of this study might provide a useful approach to improve performance deficits in young learners with ADHD on language tasks in a school setting. Awareness among parents, teachers, peers and school counsellors/psychologists for this differential association between achievement motivation and performance could be of explicit importance. The study supports an integrative approach of all learner groups in a classroom and is a step towards future evaluation and intervention programs for ADHD learners in India.

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1. LANGUAGE LEARNING AND ACHIEVEMENT MOTIVATION IN LEARNERS WITH ADHD

1.1 Introduction

Education is one of the finest influential devices in restructuring the society and enhancement of its beings. In India, the educational system has undergone crucial changes over the years, giving rise to an improved provision of education and educational opportunities. Though there is an overall improvement in educational standards, inclusive education remains as an area for revamping. The focus of the current educational system should be on incorporating learners from all strata of society into mainstream education. This includes integrating differential teaching and learning techniques for learners who are differently abled into mainstream educational practices. According to Rieser (2005), differently abled learners mostly "belong to the disadvantaged sections of the community and are systematically excluded from mainstream education."

An Indian heterogeneous classroom should model its lessons to enrich and stimulate learners of all kinds. The umbrella term 'Differently Abled Learners' integrates learners with different physical, mental and emotional learning difficulties. Educational programmes specifically for such learners should be chosen based on several factors including the ability of learners, their behaviour in a classroom and their respective mental requisites. Instructional programmes on different learning difficulties should be made part of our school curriculums.

This study makes an attempt to understand some educational practices and performance differences of differently abled learners. The present study specifically looks at the Language Task Performance of learners with Attention Deficit Hyperactivity Disorder (Henceforth abbreviated as ADHD). A learner with ADHD is one of the types of differently abled learners in a heterogeneous classroom.

1.2 English Language Education and Differently Abled Learners in India

1.2.1 Inclusive Education: Policies and Practices

Inclusive education can be defined as a way of "overcoming barriers to learning and development for all types of learners" (Booth & Ainscow, 2002). Education for All (EFA) was launched by the UNESCO (United Nation Education Scientific and Cultural Organisation) to fulfil the learning needs of all learners by the year 2015. During the World Education Forum held on April 2000 in Dakar, Senegal, a framework on Education for All (EFA) was adopted. Inclusive Education is considered as the main component of EFA. Thus, EFA claims to include all learners regardless of their culture, religion, disabilities, and others. The main challenge faced by EFA is the enclosure of the Differently Abled Learners as the term 'Disability' is defined differently in different nations (Peters & Susan, 2004).

After the first "World Conference on Education for All" in Thailand (Jomtien, 1990), which was the beginning of efforts to promote EFA, the marginalised and vulnerable section of learners were acknowledged. It addressed the issue of this section of learners alienated from the mainstream education system. This conference emphasized topics such as life-long learning along with enhancing literary skills, enhancing women's literacy and considering education beyond schooling system (Miles & Singal, 2008). The Millennium Development Goals, (MDGs) build by the UN's international community in 2000, also focussed on education and saw education as a tool to eradicate poverty. But all these international planning and agendas failed to address the education for differently abled learners. Even the Global Monitoring Reports on UNESCO'S EFA failed to address the education for differently abled learners (Miles & Singal, 2008). Recently, 'Disability' was included in the International Development Agencies agenda. EFA would remain a failure without the inclusion of all learners without discrimination (Singal, 2006). With the collective efforts of various organisations dedicated for disabled learners and other non-governmental organisations, Article 24 of the United Nations

which stands for education, now ensures inclusive, free primary and secondary education for all the differently abled learners (United Nations, 2006).

1.2.2 Educational Policies and Differently Abled Learners in India: A Brief History

Differently abled learners are defined in multiple ways in different documents in India. In a District Primary Education Programme (DPEP), a differently abled learner is addressed as a learner with special education needs (SEN) if he/she has a disability of any of the following – "visual, hearing, locomotor, and intellectual" (DPEP, 2001). The term 'Differently Abled Learners' is a more universally approved term for learners with disabilities. It was first coined by the 'US Democratic National Committee' in the early 1980s. The history of differently abled learners goes beyond this.

The Sergeant Report of 1944, a post second world war report on improving India's educational practices, was published by the Central Advisory Board of Education (CABE). As the report suggests, "provisions for the education of the handicapped (differently abled), were to form an integral part of our national education system and was to be directed by the Department of Education." The report supports the practice of sending differently abled learners to special schools or similar institutions if it is extremely necessary, i.e. when their conditions and symptoms require special attention. 1964-66, Kothari Commission, which is independent India's first education commission has the following observation: "The education of the handicapped children should be an inseparable part of the education system" (NCERT, 2006). This commission gave immense importance to integrated education and stressed on experimentation by including integrated programmes to bring learners of all strata into educational programmes (Alur, 2002).

The government abides by the Directive Principles of the constitution which urges them to generalise elementary education, and this new system of education should be guided by the following factors: a) Quality of Education for all strata of learners including the differently abled b) Equity c) Retribution of imbalances in the previous system. 73rd and 74th Constitutional Amendments along with new educational developments focus on entrusting basic education in the hands of local elected bodies, i.e. decentralisation of elementary education. Decentralisation would ensure community participation in elementary education which ultimately will lead to differently abled learners becoming part of mainstream education.

The earlier policies until the 1970s fortified segregation among learners. According to Advani (2002), "Learners with physical, sensory, or intellectual disabilities were considered different" from other learners by most educators of the time and were alienated or denied participation from mainstream school.

By the mid-20th century in India, education and other amenities to improve the conditions of physically challenged were initiated. Learners, dealing challenges with regard to mental health, were the last to have care, attention and mostly denied education. In 1934, the first school for learners who were mentally challenged was established (Mishra, 2000). Differently abled education initiatives or special education programmes were heavily reliant on the voluntary initiative. All cognitive challenges of the learners were classified under mental retardation or challenges. There was no deeper understanding of different impairments such as language impairments, and they were mostly left unattended.

According to Luthra in 1974, the Indian government's Department of Education had minimal initiatives in integrating learning across all types of learners. The policies at this period initiated some workshops which on the whole focussed on adult learners who were blind. Later, these workshop units were expanded to incorporate "learners who were deaf, physically

impaired, and faced mental challenges" (Rohindekar & Usha, 1988). The vast domain of mental challenges was not further looked into in detail. ADHD, Language Impairments, Autism, Dyslexia were all classified under 'Mental Challenges.'

The government programmes continued to support welfare approach. Government aid was given to charitable organisations for the founding of educational institutions of learners who were blind, those who were deaf, and those learners facing mental challenges. Later, The National Library for the Blind, Central Braille Press, The Employment Exchanges for the disabled were established by the Government of India. These institutions started the provisions for scholarships, set ups for early identification of conditions faced by the learners and steps for the prevention of challenges faced by these learners. They started working on developing the functional skills of the learners with challenges and providing aids and appliances for the challenged.

1.2.3 Educational Provisions of Differently Abled Learners in India

The Sarva Shiksha Abhiyan (SSA) Framework for Implementation, an initiative by the Indian Government, covers learners with Special Needs (SEN) under the Special Focus Groups section. The learners in this group are provisioned as learners with SEN and are separated from other learner groups such as girls, Scheduled Castes (SC), Scheduled Tribes (ST), and urban deprived children. NCERT and the Department of Education of Groups with Special Needs (SEN) initiate appropriate programmes for analysing and fulfilling the needs of learners who are differently abled and the socially disadvantaged section of learners.

In the more recent Inclusive Education Scheme (MHRD, 2003), the needs of differently abled learners are addressed and emphasised on the following categories of disability: "visual,

speech and hearing, locomotor, and neuro-developmental disorders which include cerebral palsy, autism, mental retardation, multiple disabilities, and learning disabilities."

A scheme sponsored by the central government itself was launched by the Indian Government in the 1970s titled "Integrated Education for Disabled Children." This scheme wanted learners who are differently abled to be part of regular schools and have equal educational opportunities. The scheme envisioned the integration of learners facing various challenges in the general community, treating them as equals and enabling their normal development, to face the world with confidence. To enforce this, the scheme put forth cooperation among mainstream and special schools to strengthen inclusive education for all learners.

In 1987, a project titled "Project Integrated Education for Disabled Children (IEDC)" was launched by the NCERT along with UNICEF. This project too wanted integration of differently abled learners into mainstream/regular schools. This project underwent an external evaluation in 1994 which tells us that the enrolment and the retention rate of differently abled learners increased considerably.

IEDC along with Sarva Shiksha Abhiyan (SSA) scheme ensures a lot of amenities such as a) one trained teacher for every eight differently abled learners, b) community participation, and c) At least one resource room for every 10 schools (NCERT, 2006). The state government ensures the enactment of legislation which ensures the equal educational opportunities for all differently abled learners by presenting multiple rights like reservations, scholarships, allowances, etc. Regardless of these efforts both by the government of India and nongovernmental organizations, equal educational opportunities, i.e. admissions to educational institutions and learning with fellow learners still remain a dream for most of the differently abled learners.

Resolving this issue would increase access to education for learners who are differently abled. By the inclusion of learners who are differently abled in key educational programmes like the DPEP and the present SSA, awareness is being generated, but most of them address differently abled needs as an isolated issue rather than one that is part of all regular educational initiatives. In addition, access to curriculum, special attention, and training to learners with various learning disabilities like ADHD and admissions to educational institutions are also concerns that require immediate actions.

According to teachers' experiences in schools, some differently abled learners learning with regular learners, face explicit difficulties in learning languages and may necessitate help in improving their areas of weaknesses and in formulating teaching-learning practices to overcome their difficulties.

According to Lele and Khaledkar (1994) "learners having problems in the hearing had difficulty in language comprehension when instructed with the language textbook prescribed for the general class. These learners who are differently abled required a greater number of periods to learn the content. Learners having difficulties in writing may need to make use of ICT, while there may be some who may require external motivation to learn and develop a method of interpreting information." Understanding the learning difficulty faced by the learner and classifying them would help the teacher to incorporate an appropriate method. Effective learning of language in the classroom also requires a teacher's ability to maintain the interest that the learners develop at the beginning of the lesson or activity.

An inclusive classroom that understands the requirements of learners both regular and differently abled and plans its lessons accordingly is the need of the hour. Incorporating new learning techniques one of which is motivating learners' achievement levels in learning tasks in the classroom improves the cognition and participation of learners in the class.

According to Loreman and Deppeler (2001), “Inclusion means full inclusion of children with diverse abilities in all aspects of schooling that other children can access and enjoy. It involves regular schools and classrooms genuinely adapting and changing to meet the needs of all children, as well as celebrating and valuing differences.”

One other important factor which affects the idea of inclusion is that most of the educators believe that differently abled stems from disability conditions. Not all learners facing disabilities have differential needs or special education needs right from their elementary level. These learners and their peers use various teaching aids while learning such as their walking sticks, ear aids, spectacles and other aids meant for the eye, educational aids like bean bags, the modelling clay, etc. Yet, some learners who are differently abled require the following:

• Extra time and an appropriate mode for the successful completion of tests.

• Modification, substitution, and replacement of an irrelevant curriculum which fails to include learners with different needs.

• Child-centric learning by adapting the learning materials according to the need of each learner

• Age appropriate learning materials

• Setting up classrooms and its management so to maintain the attention span of learners

• Lessons should be of described using ICT or video to suit all types of learners

Therefore, inclusive education urges us to provide equal learning opportunities for learners with different needs. It also depends on Curriculum modification by respective educational institutions and designing appropriate programmes of study whenever necessary to provide applicable and stimulating tasks to all learners. Differentiation of learning materials according to the learner group is essential. This helps the educators to be more specific about the learner and the learner difficulty giving a whole new platform for the learners to perform in a regular school.

1.2.4 Challenges of Teaching and Learning English as a Second Language in India

1.2.4.1 For Learners in General

"Throughout India, there is a belief among almost all castes and classes in both rural and urban areas in the transformative power of English. English is seen not just as a useful skill but a symbol of a better life, a pathway out of poverty and oppression" (Graddol, 1997).

A regular English language classroom has a broad range of learners with various learning abilities and needs. The variables associated with heterogeneous language learner group, in general, include their socio-economic, cultural, linguistic backgrounds and their range of difficulties in learning a second language, English in this case, which comprises factors like their level of first language literacy, years and type of schooling and exposure to the second language.

Second language learners of English in India face several challenges at various stages. It starts with the medium of education. In most of the rural parts of India, the medium of education is the vernacular language. On the contrary, higher education and job scenario necessitate the English as their medium of instruction.

Apart from this, the learner-teacher ratio is high in most of rural India classrooms leading to ineffectiveness. Speaking and learning the language is not promoted in the rural atmosphere. Individual attention to learners in classrooms with a large student ratio is difficult. A major challenge faced by learners in both rural and urban schools in India is that English is not their first language and is mostly their second language. The places where there is a local language like Malayalam, Kannada, and others, English becomes the third langauage. According to the 'Three Language Formula' in India (Government of India, Department of Education, 1968), language learning in India comprises learning 'Hindi, English and the regional language.' Thus, learning English is preceded by the regional language, which is then followed by Hindi.

Language learning is also affected by regional differences. It is a difficult task for learners from rural areas as compared to learners from urban areas. Parents of most of the urban learners are educated, and that makes language learning an easier task as there is more chance for the learners to speak or read in English outside the classroom which is not the case in rural parts of the country. Most of the rural classrooms follow a bilingual method in language classes. This method is one of the ways to include all types of learners in the classroom especially for learners who do not get a chance to use English language outside the classrooms or are from a less privileged section of the society (Miles & Singal, 2008).

Lack of trained teachers in this specific field to incorporate the regional language of the learners to teach English in rural areas has become a challenge. An insufficient number of workshops and seminars for language teachers for their skill enhancement becomes a hurdle in the language teaching-learning process (Ainscow, Booth, and Dyson, 2006). Adequate training and support to language teachers should be made possible, and it should be accessible to all teachers both from rural and urban India.

Effective teaching of the English language had tried incorporating certain methods in the past and is still in use in a certain curriculum. These methods are the 20th Century Language learning methods, which have been classified according to three principle views. The Structural view which includes "Grammar-translation method and Audio-lingual method; the Functional view which includes Situational language teaching and Direct practice methods; and finally, the Interactive view which includes Direct method, Communicative language teaching method, Language immersion method, Community language learning method and Natural Approach" (Brown, 2007). Learning techniques like 'Grammar translation method' are used by language teachers to teach young learners, where there is a word to word translation by the teacher to learners in the native language to make him/her comprehend and learn English. The major flaw here is that both the teacher and the learner concentrate more on the form of the language rather than meaning. Learners are made to understand word by word meaning of a text in English by the help of regional language. The entire message of the text is rarely conveyed by the teacher (Krashen, S., 1989). Regardless, this method is still used in many rural schools across India.

Another major challenge in teaching-learning English language is that while learning to speak English, the mother tongue mostly interferes the pronunciation of English. Stress, intonation, and pronunciation of English are not given importance (Ellis, 1989). Another key skill required for learning the English language is listening. This is very often overlooked in Indian classrooms. Enhancing this skill is given least importance with the assumption of learners improving it on their own.

Indian classrooms should also work towards incorporating peer teaching and learning, role-play and group activities. Indian classrooms are mostly teacher-centric than being learner-centric leading to a passive learner learning atmosphere. The learner does not involve in any teaching-learning activities actively and refrain from contributing ideas to the class. The promotion of learners working in pairs and groups by the teachers will aid in language learning.

1.2.4.2 For Differently Abled Learners

Apart from all challenges in Language learning for learners in general, there could be another smaller section of differently abled learners in a classroom whose learning becomes more challenging due to their physical and mental disabilities. A prognosis, to learners facing difficulty, "results in learning difficulties and thus, makes processing, learning, and teaching much more demanding and difficult than learning and teaching of common learners" (Hvozdikova, 2011).

Following the 'Three Language Formula,' most rural Indian classrooms follow a bilingual method in language classes, i.e., using a native language to teach English. Differently abled learners utilize this inclusion of native language in learning the English language as an aid to understand the usage and context better. If a learner finds it problematic to understand concepts in L2, i.e., English, the learner can use L1, i.e., mother tongue terminologies for concepts and relate the same to the English language (Lado, 1964).

Learning a language requires a learner to become skilled at Listening, Speaking, Reading and Writing. Being a differently abled learner is a challenge in advancing these skills. Effective teaching to incorporate all the differently abled learners is demanding for many teachers due to the lack of teaching aids, scarcity of required technical support and appropriate atmosphere to understand the learners' varying needs to learn the language.

An adequate number of teacher preparation courses to enhance knowledge and skills to teach the subject effectively in rural Indian classrooms are missing. This scenario arises since the locals do not use English language for their daily tasks and trade. The society and social structure demand communication in the native language. The scope of using the language outside the classroom is limited for teachers in rural India which in turn limit them from practicing their teaching practices in English (Malhotra, 2015). This scenario can be improved

by continuous skill enhancement of the teachers by means of —periodic workshops, video/audio recordings of lessons, projects, daily lesson plans, and assignments. As most of the differently abled learners of English are first-generation learners of this language and require utmost guidance, the role of skilled teachers in English are pivotal.

1.3 Language Learning of ADHD Learners

1.3.1 What is ADHD?

Attention-Deficit Hyperactivity Disorder is widely considered as a psychological disorder categorized by developmentally inappropriate levels of attention or hyperactivity-impulsivity or both among learners (National Institute for Mental Health, 2003; Reiff, 2004; Miller, Trampush, McKay, Newcorn and Halperin, 2006; Simon, 2006). ADHD is an extremely "genetic, brain-based syndrome that has to do with the regulation of a set of brain functions and related behaviors. These brain operations are collectively referred to as Executive Functioning Skills" (Pribram, Karl, 1970; Brown, 2005) and include important functions: 1) Attention 2) Concentration 3) Memory 4) Motivation 5) Effort 6) Learning from mistakes (Reflectivity) 7) Impulsivity 8) Hyperactivity 9) Organisation 10) Social Skills.

1.3.2 Characteristics of ADHD Learners

According to Barkley (1998) and Tannock (1998), learners diagnosed with ADHD in general, observed on their executive functions confirm deficiencies of cognitive measures.

Most learners with ADHD face challenges in their schooling since they are at an increased risk of undergoing functional problems, including school performance difficulties, academic failure, strained interpersonal relationships with their families and peers and low self-esteem (Skount, Philalithis, Mpitzaraki, Vamvoukas and Galanakis, 2006:658). Learners with

ADHD find it hard to remember and to follow instructions of any kind - written and verbal. They have difficulty in maintaining a neat handwriting, remembering right spellings, and in controlling impulses so as to complete tasks. Most of these learners do not like going to school as they have often been reproached for their below grade level scholastic performance and improper behaviour (Abikoff, & Jensen, 2002; Arnold et al., 2002; Barkley, 1997; Stewart, 2006:10). DuPaul (2007:218) believes that with appropriate interventions and modifications by teachers, learners with ADHD will experience less academic and behavioural difficulties. However, most teachers currently lack the knowledge and training to come up with appropriate interventions and modifications. In school, when learners face trouble meeting grade-appropriate behaviour, they are often referred for diagnosis, most probably because the school environment requires learners to engage in behaviours that are opposing to the core symptoms of ADHD.

Core symptoms of ADHD remain common across learners which include "cognitive difficulties, physical difficulties, and emotional difficulties. These symptoms occur over a prolonged period and are present from a very young age, although they may not be prominent until a learner is pushed to concentrate or to organize his or her life" (Amen, 2001:12; DuPaul & Weyandt, 2006; Reiff, 2004:57; Simon, 2006). Thus, in a school setting when ADHD learners are pushed towards a following an academic regimen, they fail to accomplish their complete academic potential as they face trouble in controlling their behaviour in school and other social settings.

In 2006, Lauth et al., considered classrooms as the primary environment for detection of ADHD amongst learners as a) Schools urge their learners to have the high attention span, learning and self-control b) compare academic and developmental progress among peers. First-hand observations help researchers in identifying and analysing ADHD learners better.

Therefore, it is essential for the school personnel, families, and primary care clinicians of these learners to work collaboratively for documenting and analyzing specific symptoms and their role on these learners' functioning. ADHD, currently, lack biological markers that aids in specific diagnosis. Detection of ADHD is thus done by the documentation of symptoms accompanying functional challenges from multiple settings including both social and personal.

1.3.3 Classification of ADHD

"The Diagnostic and Statistical Manual of Mental-Disorders, Fourth Edition (DSM-IV)", characterizes the following three subtypes of ADHD:

• "Inattentive only (ADHD-IA) (formerly known as an attention-deficit disorder [ADD])"— Approximately 30% to 40% of learners diagnosed with ADHD are affected by this subtype. In this case, learners are not overly active and neither too less disruptive in the classroom or other activities. This type of ADHD is barely noticeable. This subtype of ADHD is prevalent mostly among girls.

• "Hyperactive/Impulsive (ADHD-H/I)"— Approximately 10% of learners with ADHD is affected by this subtype. Learners with this particular type of ADHD are capable of paying attention to classrooms and other social settings but display hyperactive and impulsive behaviour. Green and Chee (1997), as well as Solanto (2002), remarked that learners with this subtype of ADHD, frequently display compulsive habits and suffer from anxieties, fears, and phobias. As these learners remain hypersensitive, they may occasionally suffer from depression. Their emotions control their behaviour and tend to act or perform chores in an immature manner. Their mental age is 2-3 years lesser than their peers (Stewart, 2006:21).

• "Combined Inattentive/Hyperactive/Impulsive"—Learners with this subtype of ADHD display all the three symptoms including inattentiveness, hyper activeness, and impulsiveness. Approximately 50% to 60% of learners diagnosed with ADHD are affected by this subtype.

According to Green & Chee (1997:29), this subtype of learners is likely to remain hyperactive due to their constant excessive physical activities like jumping, fidgeting, squirming, rocking, wiggling, running, talking and others.

1.3.4 Diagnosis and Evaluation of the Learner with ADHD

According to the *American Academy of Paediatrics* (AAP), an efficient treatment commences with an accurate and firm diagnosis. From the list of recommendations by AAP, those relevant for the present study, are shortlisted by the researcher. They are:

1. "In a learner belonging to the age group of 6 to 12 years, who presents with inattention, hyperactivity, impulsivity, academic underachievement, or behaviour problems, primary care clinicians should initiate an evaluation for ADHD.
2. The diagnosis of ADHD requires that a learner meet Diagnostic and Statistical Manual of Mental-Disorders, Fourth Edition or DSM-IV standards.
3. Evidence obtained directly from primary caregivers, i.e., parents or guardians is required for the assessment of ADHD. This helps the clinician to gather information on the core symptoms of ADHD in various environments, duration of symptoms, the age of onset, and functional impairment gradation.
4. The subject/school teachers or school professional also is required to provide details or evidence for the evaluation of ADHD to understand the core symptoms of ADHD, duration of symptoms, the degree of functional impairment, and coexisting conditions.
5. Evaluation of the learner with ADHD should incorporate tests or assessment for coexisting impairments.
6. Routine diagnostic tests are not for establishing ADHD but are essential for the assessment of other coexisting conditions (e.g., learning disabilities, mental retardation).

7. The diagnosis of ADHD is usually carried out by clinicians using appropriate tools and assessments. Some of them are Conner's Parent and Teacher Rating Scales, Vineland Adaptive Behaviour Scales, Behaviour Assessment System for Children (BASC), Wechsler Intelligence Scale for Children (WISC-V), Woodcock-Johnson III Tests of Cognitive Abilities, Wechsler Individual Achievement Test (WIAT-III), NIHQ's Vanderbilt's assessment and others."

NIHQ's Vanderbilt's assessment is one of the tools used by them to diagnose ADHD among learners in the age group of 6 – 12. The assessment includes various detailed documents which are completed by the learners' primary caregivers and teachers.

1.3.5 ADHD and the Language Learning Process

In this section, I have attempted to connect different teaching and learning aspects related to ADHD learners keeping in mind the classroom setup. An equilibrium between different teaching-learning aspects and learners with varied competencies would enhance our differently abled language learners.

1.3.5.1 How does ADHD affect the language learning process?

ADHD learners, regardless of their age groups and stages of learning, experience difficulties pertaining to language learning which typically cover the following modalities of language:

a) Syntax - Difficulties of (oral and grammar) comprehending the structural components of sentences;
b) Semantics – Lack the ability to comprehend or understand texts using the context;
c) Pragmatics - Lack the ability to use language as a means to interact with others socially or for a specific purpose;

d) Metalinguistics – Lack the ability to understand multi-meaning in words, figurative language, ambiguous sentences etc.

(Cohen et al., 1998; Greathead, 2016)

An ADHD learner has difficulty maintaining their attention and exertion for a higher time span. They ponder multiple things leading to frequent distractions and ultimately leaving the tasks assigned incomplete (Amen, 2001:13). Compared to non-ADHD learners, "learners with ADHD engage more in off-task behaviour such as daydreaming and in other activities" not required for purposes of the lesson (Barkley, 2006; DuPaul et al., 2006). For example, they talk to other learners and are guilty of disruptive behaviour such as interrupting others and not letting them complete tasks. This mainly affects their oral or written tasks in a classroom as the learner might answer in partial sentences.

DuPaul et al. (2007:161) pointed out that learners diagnosed with ADHD pay extreme attention and unrivaled interest on tasks that are new, novel, highly stimulating, interesting or frightening. These tasks arouse intrinsic stimulation which leads to the activation of the brain functions and which in fact help learners with ADHD to focus and concentrate. This explains why an ADHD learner faces challenges in paying attention to a monotonous or everyday task like schoolwork (Reiff, 2004:58). They tend to get lost in between story reading lessons and come up with characters not present in the book.

Most of the Non-ADHD learners can block out superfluous environmental stimuli: traffic sounds, animal sounds, food smell, and others. According to Amen (2001), learners diagnosed with ADHD on the other hand, get hypersensitive with their senses, and they find it extremely difficult in suppressing the sounds, sights and other frequent changes in the immediate environment. Due to which paying attention in a classroom becomes a battle. This happens due to the poor performance of the prefrontal cortex of the brain which results in distractibility. In the case of ADHD learners, the prefrontal cortex remains underactive leading

the parietal lobes to bombard the learners with environmental stimuli. When prefrontal cortex remains underactive, not sending inhibitory signals, learners get distracted by their internal thoughts and feelings. Learning phrases appropriate for situations is hence difficult with these learners, and they end up using the same words or phrases for multiple occasions. The challenge here remains to focus on relevant subjects (Amen, 2001:12; DuPaul et al., 2006; Reiff, 2004:57; Simon, 2006). As mentioned earlier, ADHD learners undergo excessive auditory sensitivity (DuPaul, 2006; Reiff, 2004:59).

The next challenge faced by ADHD learners is to be in an institution with a fixed set of rules and regulations. They usually struggle to follow a long-term goal and find it hard to complete and organize schoolwork. Their rooms, desks, closets or school bags frequently are a disaster (Amen, 2001:17; Armstrong, 1999:92; Green & Chee, 1997:33). Learners with ADHD, mostly, do not follow any system and are inconsistent, unpredictable, and aimless. They are spur-of-the-moment actors and remain unaware of the consequences (Green & Chee, 1997:32). Learners often commit careless errors and remain ignorant about their health and safety by taking up tasks' way too dangerous for them. They struggle to maintain self-discipline and usually portray socially unacceptable behaviours. (Amen, 2001:20; Stewart, 2006:20).

ADHD learners are prone to frequent ear infections which affect their hearing leading to disruption in the attention span (Anon, 2005; Stewart, 2006). 80% of the ADHD learners find themselves constantly thirsty due to low Omega-3 fatty acid levels. This deficiency leads to distressed fine or gross motor skills and inadequate co-ordination (Green & Chee, 1997:6; Kewley, 2005:35). This is the reason for some learners experiencing clumsiness or difficulties during physical exertion. Most of the learners leave the classroom activities unfinished due to the same. Some ADHD learners find the tasks extremely difficult that require accurate hand-eye coordination and fine motor skills such as, writing and drawing (Stewart, 2006:20).

The study conducted by Amen (2001) and Simon (2006) show that learners diagnosed with ADHD do not usually own their mistakes and have a tendency of blaming others for their own. Not succeeding in classroom tasks makes them aggressive. The fear of failure or the odds of failing leads them to abandon exams. This is where motivation plays a key role. They do not understand social terms. Their diction is usually limited. They do not tolerate frustration and have high threshold aggression. They face emotional meltdowns easily; they understand only a two-way system, e.g., "now or never" "right or wrong" “Yes or No” - there is no intermediate answer, and they don’t give up (Green & Chee, 1997:30).

To tackle all these challenges and build an inclusive classroom, the teacher is the key player. It is the teacher in a language classroom who makes the language material of all forms accessible to heterogeneous learners including learners diagnosed with ADHD. Differential learners require adaptations or differentiated materials. For example, in the case of ADHD learners, developing tasks based on their favourite movement or tools is one of the solutions. Learning parts of speech and colours based on their preferences would grab their attention and would help in the retention of the same. Learning movement words or verbs based on their favourite exercise or dance steps also results in improved retention.

Differentiated instruction by Tomilson (2001) has categorized the adaptations the teacher makes to meet learners’ needs as content, process, or product adaptations:

a) “Content adaptations for language learners like simplifying lengthy texts, playing videos/ audio-visual support along with novels.
b) Process adaptations could involve offering the learner support in doing the task, forming cooperative groups, assigning pair work, using an electronic dictionary, simplified notes.

c) Product adaptations might involve assigning the learner to write a paragraph instead of an essay, five statements instead of 10, or the option to create illustrations to show comprehension rather than writing the narrative."

1.3.5.2 ADHD and Multiple Intelligences

Howard Gardner's Multiple Intelligences (MI) theory aids different ADHD learners in learning English by focussing on their strengths. This brings out the best products of learning regarding different intellectual competencies: linguistic; musical; interpersonal; intrapersonal; naturalist; bodily/kinaesthetic; spatial and logical/mathematical (Gardener, 2004:41). MI theory helps teachers in developing a holistic approach to education (Kornhaber, 2001:276). Howard Gardner wants teachers to incorporate multiple intelligences in lessons because it helps learners to relate the knowledge to real-world experiences (Smith, 2002:6). Cognizance of the eight intelligences also helps teachers to teach in eight different ways instead of one (Kornhaber, 2001:276). Contrarily, according to Hanley et al. (2002:18), teachers occasionally find it problematic to let learners take charge of their learning using their preferred learning styles. Giving importance to multiple intelligences in teaching and learning may help learners to discover what they are good at and it will help them to focus on their abilities rather than disabilities (Rettig, 2005:256). Looking at multiple competencies of ADHD learners is essential as they face difficulties with social skills. Adaptation of content and taking in various multiple intelligences techniques can provide a better learning environment for ADHD language learners.

1.3.5.3 Subsumption Theory and language learners with ADHD

David Ausubel's learning theory interprets learning as a process of relating new events or items to already existing cognitive concepts or propositions. Meaning there is a "clearly

articulated and precisely differentiated conscious experience that emerges when potentially meaningful signs, symbols, concepts, or propositions are related to and incorporated within a given individual's cognitive structure on a nonarbitrary and substantive basis" (Anderson & Ausubel, 1965:8). The application of this theory might seem appropriate only to learners who have independent thought and working process. The researcher believes that in case of ADHD students with metalinguistic difficulty, that the teachers can experiment with subsumption technique. The core difference with regard to ADHD learners is that instead of the learners, the teacher will attempt to create a conscious learning environment for the learners to connect the concepts covered in the previous classes.

The connection can be achieved at various levels in a second language learning classroom:

a) Listening and responding to second language songs, poems, or stories which have rhyming words or have refrains. The part of the teacher here is to add on previously learned topics to new ones. Here, in this case, a learner familiar with rhyming words can be taught the rhyming scheme and rhythm.
b) ADHD students who have difficulties in identifying sounds in English can be trained by the teacher aiding them in identifying already known words, their meanings, and intonations. This helps tremendously in auditory awareness. Audio or video recordings can be used.
c) Learners will learn new aspects of language by responding to a certain word or phrase already known, for example, a greeting.
d) Use audio recordings or YouTube videos to associate a word and object, for example associating various collective nouns to different animals.

e) Learners will express their views about people, places, and environments by expressing their likes and dislikes, for example, using the different vocabulary of words, symbols, gestures and facial expressions.

The possible measures mentioned here provide a collaborative learning perspective of the teacher and the learner contributing to the learning process. The teacher helps the learner with metalingual language learning difficulty by creating meaningful associations rather than forcing the learner store information as discrete units. The success of a second language learning classroom is in creating a meaningful learning environment rather than learners learning language by rote learning/memorizing.

1.3.5.4 Second language learning and social-psychological factors affecting ADHD learners

There are evidence that social and psychological factors occupy a major role in second/foreign language learning. R.C Gardner (1958) points, "studies held to predict achievement in a second language lacked the incorporation of personal characteristics such as interest, motivation, and effort."

Social factors refer to any characteristics of a social community which might influence an individual's acquisition of a second language. Here in the case of ADHD learners, it would be:

1) The linguistic background of the family and language attitude

The linguistic background of the family plays a key role in learning a second language. Parents are believed to have a major role in the learner's second/foreign language learning process. Gardner (1977) identifies two roles of the parents: active or passive. According to him, "The first refers to the parents' conscious promotion of the learner's language learning as they monitor their progress and praise their success. The latter may include encouraging and supervising the learner's work but necessarily involves transmitting negative attitudes towards

second/foreign language learning." Parents, in this case, do not promote the usage of the second language outside the classroom setup. The exposure and understanding of L1 of an ADHD learner would assist in learning the L2. They would attempt to pay attention to the L2 language activities in the classroom as they have a fundamental idea of how L1 functions in their home environment. If they come from a bilingual society/ home, they would know the varied functions of language on various occasions or places, which would help them relate in a language learning classroom.

2) Communication between ADHD learners and teachers

The teachers must understand the learners' varying linguistic needs and constantly work towards their language enhancement. Their varying competence and activities in accordance would strengthen the bond between the teacher and the learner. Krajka (2010:252) suggests four types of issues that teachers might encounter. They are:

M*ethodology related issues – A*s ADHD learners would require a slightly different philosophy of learning. Therefore, teachers have to improvise on the methods and materials used for ADHD learners. Teachers should also avoid over-simplification or adaptation of learning materials which would distance the learners from actual social situations.

Personality-related issues- As the symptoms of ADHD are different for different learners, their language requirements too differ. A learner could be diagnosed with any subset of ADHD, and in some cases, it may not necessarily result in language difficulty. ADHD is not a physical impairment and not all ADHD affected learners are language deficit. It involves various factors like motivation, attention span, hyperactivity, and others. Understanding and identifying an ADHD learner by the teacher could result in framing the right activity for language lessons. Learner- teacher bond in this situation is vital failing which the lessons will be less impactful.

Language-related issues –The challenges faced by an ADHD learner have already been discussed in section 2.5.1. ADHD learners might find it difficult to understand the intricacies of language especially if the target language is not used in their home interactions.

Culturally-related issues – arises when a teacher has to teach the target language in a heterogeneous classroom with learners from different ethnic backgrounds or in Krajka's (2010) words "encompassing learners from very different cultural backgrounds in mixed ethnic classes." The interethnic contact or when learners whose L1s are different, jointly learn the target language, there is motivational support derived from the appreciation and understanding of their L1s which ultimately help them learn the target language. Special educational programs for all learners can be developed to provide interaction between learners of a second language and native speakers of the target language, such as "Language Study Abroad Programs", "Exchange Programs" and "Excursion Programs."

3) <u>The language norms of society</u>

Language socialization is an area of concern as language norms are domain specific. According to Hymes and Cooper, knowledge about the target language is complete only when the learners are aware of what is systematically possible in that language. They emphasize on the importance of contextual appropriacy. According to Hymes (1971), "There are rules of use without which the rules of grammar would be useless." ADHD learners lack the ability to use context-specific and appropriate terms in the target language. (Cohen et al., 1998; Greathead, 2016). What can be construed as the norm is debatable. In a default discourse, norms aren't defined. This makes it extremely difficult for differential learners to interact in a social situation with a varying set of norms per situations. This would lead to a gap in communication which ultimately leads to a failure in language maintenance. This might seclude these learners with specific needs from society.

1.3.5.5 Identifying learners' style and strategies-based instruction

Identifying learners' style would lower their inhibitions and boost their self-confidence and risk-taking factors. This is because as the task completion rates are high when the teacher customises the learning tasks according to the learner type (Kendall, 2010). Looking at various strategies are important because the characteristics of ADHD learners differ. Some of the strategies that can be used to manage specific characteristics of ADHD learners are:

a) Impulsiveness: It is important for the teacher to teach the learner to keep order in what they do or how they act. Learners with attention difficulties will have problem focussing on one activity for a longer time. Serfontein (1999) suggests that in such classrooms the ADHD learner should be placed as close to the teacher as possible and there should be no other disturbers. The other strategy is to divide one activity into many fractional activities.

b) Lower social competence: Many teachers and parents are concerned about the learners' emotional shallowness. Their confidence and self-esteem lower with negative experiences at school (Green & Chee, 1997). The role of the teacher and parents is to reinforce their strengths as much as possible. The strategy here is to focus on the learners' strengths. Lessons shouldn't be stressful, and a friendly atmosphere should be maintained. Teachers and peers should refrain from making fun of these learners. This leads to a productive and effective learning environment.

1.3.5.6 Zone of Proximal Development and ADHD Learners

Vygotsky (1978) advocated the view that "Learner's thinking and meaning-making are socially constructed and emerge out of their social interactions with their environment" (Kaufman, 2004:304). According to Vygotsky, the learners' optimal development is when peers or teachers assist them in areas they haven't learned. Vygotsky considered social

interaction vital for cognitive development. Hvodikova (2011) considers the importance of creative drama in enhancing social skills in ADHD learners as drama functions in the context of group or teamwork. If we use role-plays or creative drama in a second language learning classroom, it will promote co-operation among different learners; they will help each other to attain certain aspects unknown or less familiar to them. The role play classroom can be considered as the social interaction context for the learners. There will be a feeling of acceptance among all learners. The teacher should encourage and promote a friendly atmosphere throughout the session. Cooperation among different learners increases communication and social perception of differently abled learners as well as other learners in the classroom. Teachers should have a certain social objective for each lesson; such as, improve social competence and self-esteem, increase cooperation among learners and their willingness to work as a team and build on ideas to become more responsible. All these tasks and strategies would enhance the existing self-image of the learner.

ADHD is not a language impairment. Language impairment is one of the aspects of ADHD. Understanding each learner and their specific language requirement is a challenge that most teachers encounter. Teachers should differentiate or adapt instructions or language materials to incorporate all learners in the classroom. This would enhance the learners' self-concept as they would accomplish tasks in the stipulated time frame or needs of the curriculum.

To sum up, ADHD learners are classified as learners with a higher degree of hyperactivity, impulsivity or inattention. Incorporating a motivational process in the teaching and learning activities would enhance and reinforce learning among ADHD learners (Castellanos & Tannock, 2002; Konrad, Gauggel, Manz, and Scholl, 2000). This study tries to incorporate Achievement Motivation to enhance the Language Task Performance of ADHD learners in an Indian Classroom setup. In the next section let us turn our focus to Achievement Motivation.

1.4 Achievement Motivation

In a heterogeneous classroom of learners, the approach of incorporating achievement motivation in teaching and learning practices might give desirable results especially in the case of learners with ADHD. Research on Achievement Motivation and how Achievement Motivation enhances the academic performance of learners has been of great interest for the past some years. Over the past so many years, quite a lot of studies have been conducted to determine or pinpoint the elements that lead to learner motivation (Atkinson & Feather, 1966; Spence, 1983).

1.4.1 What is Achievement Motivation?

Achievement motivation is often denoted as "the need for achievement." Need for achievement is considered as an important motive of achievement comprising of aspiration, effort, and persistence. "The need for achievement" was first introduced into psychology by H. Murray in "Explorations in Personalit" in 1938. The need for achievement can be defined as the intense, prolonged and repeated efforts to accomplish something difficult. This need arises in individuals when his/her performance is evaluated in relation to some standard of excellence. In the late 1930s, H. Murray with Ch. Morgan developed the "Thematic Apperception Test (TAT)" for evaluating needs and motives of cohorts which in turn gives us the measure of their 'need for achievement.' These needs and motives in learners can be broadly classified into intrinsic and extrinsic.

1.4.2 Intrinsic and Extrinsic Motives in Learners

Achievement motives vary amongst learners based on the learner's aptitude, abilities and needs. These can either be extrinsic or intrinsic depending upon the learner. Motivation can be broadly classified as intrinsic and extrinsic motivation. A person is intrinsically

motivated when his/her behaviour or performance arises from within and is driven by internal rewards. If a learner's need to achieve is not from within or if the drive is not internal, then, the learner depends on outside or extrinsic factors for achievement. Thus, the need to achieve in learners can be driven by intrinsic, extrinsic or both factors. The next section discusses intrinsic motives that lead to achievement motivation in learners.

1.4.3 Intrinsic Achievement Motives in Learners

According to the conventional achievement motive research of McClelland and colleagues (e.g., McClelland et al., 1953), the achievement motivation is "a constant drive to improve one's level of performance" by engaging in one's own learning and to accomplish success. One of the characteristics of achievement-motivated people is that they are more concerned with personal achievement than with the rewards of success or external factors and are focused on their long-term goals (McClelland, Atkinson, Clark, and Lowell, 1953). Their "need for achievement" is also the consequence of emotional struggle between the hope to achieve success and the yearning to dodge failure. (avoidance behaviour, fearfulness in achievement situations). Consequently, learners with higher need for achievement are frequently engaged in their learning (e.g., analysing the demands of school assignments, monitoring their progress toward completion of assignments, reworking and improving their tasks and performance), and thus, are able to inhibit short-term needs in favour of long-term goals in a better manner than the non-motivated learners (Pintrich, 1999; Steinmayr & Spinath, 2009).

Another achievement motive analysis was given by J.Atkinson and his associates in 1957 and was later modified in 1964. They developed a "risk preference" model which predicts individuals who have a strong need for achievement. They claimed that people encompassing a sturdy "need for achievement" preferred and most often selected achievement tasks of a

moderate level of difficulty, whereas failure-oriented subjects or individuals with a less need for achievement often avoided tasks with a moderate level of difficulty. According to Schneider (1976), this 'risk preference' model though successful in predicting choice behaviour and persistence, it failed in predicting performance in achievement-oriented situations.

A similar theory was developed by Atkinson and Feather in 1966 on individuals with a strong need for achievement. They stated, "a person's achievement-oriented motive is built on three parts: a) the individual's predisposition to achievement b) the probability of success, c) the individual's perception of the value of the task. The strength of motivation is important in this scenario." Different variables are considered for the success of different tasks; it is task specific. Often this is done by the learner's mind subconsciously. These task-specific variables influence the level up to which the individual is motivated to advance or get away from the task. A truly motivated person who envisions an achievement tunes his/her behavior towards a positive possibility. Contrary to this, a less-motivated person desiring to avoid failure, his/her behaviour is fixated by a disagreeable possibility. In other words, if an individual has a high probability of completing a task successfully, then he/she would find a given task easy. On the contrary to this, if an individual finds a task difficult, he/she will have a low probability of completing the task successfully. The relative strength of the achievement motives determines which motive the person selects for completing the task successfully. This selection either leads to achieve success or to avoid failure.

In Atkinson and Feather (1966) words, "The strength of motivation to perform some act is assumed to be a multiplicative function of the strength of the motive, the expectancy (subjective probability) that the act will have as a consequence the attainment of an incentive, and the value of the incentive: Motivational Force = Motive X Expectancy X Incentive" (p. 13).

The next theory on achievement motives of individuals was given by Bar-Tal, Frieze, and Greenberg, in 1974. According to them, a learner's likelihood for succeeding in a task would require the two motives. They are a) "need to achieve and b) a fear of failure. These two motives are strong emotions that influence the individual's decision on whether to attempt the task or not." If a task instantaneously stimulates an individual's motivation to advance towards the task and the motivation to get away from the task, the result is calculated by adding both, i.e., their sum. If the result has a positive inclination to advance towards the task, then the individual will be motivated to complete or do the task. If the result has a negative inclination or is more positive to get away from the given task, then the individual will not be motivated to do the task.

Motivation is a key element in the performance of learners. Learners who are highly motivated, in general, do well academically. Those learners with low motivation struggle to perform well academically. Though motivation and achievement mostly share a positive inclination, they do not assure each other. High motivation does not necessarily vouch for achievement, and similarly, great achievement does not reflect motivation (Keefe & Jenkins, 1993). Learners who are high achievers are mostly those who are striving for success, competitive, or taking charge. Learners who are low achievers are usually seen or classified as quitters, non-participants, or failures. Achievement motives are usually specific to each person approaching situations with a unique combination of numerous achievement motives. Parker and Johnson (1981) consider an individual's achievement motive as a personality trait. According to them, "each person has different degrees of achievement motivation." The learner's early developmental stage also plays a significant role in developing and molding achievement motives. These achievement motives are called learned motives as they are shaped by play, experience, and rewards or consequences for actions or behaviors. It is at this time

when primary caregivers and teachers can have the greatest impact on the learner's habits and values about achievement motivation.

Recent studies on Achievement Motivation considers achievement as a need that drives an individual to improve, succeed, or excel in current achievements, and results in an optimal state of arousal to meet the demands of tasks to be performed (Covington, 2000). Considering all these factors, four achievement motives which were initially developed by McClelland and Winter (1969) are shortlisted for learners in an academic environment whose motives accompany high levels of Achievement Motivation. These four motives that determine achievement motivation are:

- The need to achieve
- The fear of failure
- The odds of success
- Perception of outcome

1.4.3.1 The Need to Achieve

Most of the learners are influenced by a need to achieve. This drives them to be successful in their attempts. The extent of this drive differs in different learners. For some learners, the desire to achieve overpowers other factors that could cause failures, such as inadequacy of skills, experience, ability, or time. "The learner works hard to get through or eliminate these setbacks" (Atkinson, 1974). Studies conducted by Atkinson (1999) revealed that a certain percentage of learners worked hard to succeed in a task which is not their preference, just to maintain their high-grade point average or high-class rank. This reflects the learner's perception of success. Irrespective of the nature of the tasks, learners maintaining a positive perception of success, work hard to succeed. High level of achievement motivation and positive rate of success is linked with higher desire to achieve (Accordino et al., 2000).

1.4.3.2 The Fear of Failure

In this section, we will look at learners whose need for achievement is overpowered by their fear of failure. Their concern with failure does not let them succeed at the task; usually, they do not even attempt the task. Atkinson(1974) states, "these learners find it extremely challenging to deal with their shortcomings, and they fear to fail in front of their peers, so they avoid situations where the probability of failing is high or where things are not in their control."

According to Tracy (1993), "most adults do not succeed because of their fear of failure." Fear convinces to set easier goals and do less than you are capable of doing. "Fear triggers an internal defense system and fools you into thinking that you have perfectly good reasons not to change" (Simon, 1988). According to Atkinson and Feather (1966), "a consistently applied expectancy X value-type of the theory of motivation is the concept that the expectation of a negative consequence should always produce negative motivation, that is, a tendency to curb an activity that is expected to produce the negative consequence." If a learner is in anticipation of failure or a similar negative response, the learner consistently avoids such situations. Similarly, if the learner does end up confronted with a possible negative consequence, the learner mostly remains passive, to achieve a positive outcome. Their idea is to avoid such tasks so that failure can be avoided: lack of participation here leads to a lack of failure.

Alderman (1999) shares a similar idea about learners. According to him, "learners often believe that ability is the key element for being successful and lack of ability is the key reason for failure." This leads them to avoid failure and protect their own self – worth and from the perception that they have a low ability. If the learner attributes achievement to ability, the effort may be useless, and the learner may decrease effort to protect their self-worth. "A learner's motivation may be buried under years of less – than – successful experiences in school" (Canfield & Siccone, 1993:67). Here the primary motive of learners is never to gain the

rewards or benefits of the outcome but to dodge failure. The less 'the fear of failure', the more the rate of achievement (Simons, 1999).

1.4.3.3 The Odds of Success

Learners are considered primarily motivated to act in ways that help them in goal accomplishment. The perceived achievability and rank or importance of tasks determines the strength of the motivation to act. Atkinson and Feather (1966) further state, "the more the probability of success, as in confronting a very easy task, the more the sense of humiliation accompanying failure. However, when the probability for success is less, as in confronting a challenging task, there is a little embarrassment in failing." For some learners, failing is more humiliating which forces them not to attempt tasks which are hard. If the task has a higher difficulty in accomplishment, then higher is the probability of failing in the task. Succeeding in a highly difficult task with a probability of failure is highly motivating for some learners.

What are the expectations of an individual whose disposition to avoid failure is stronger than the motive to achieve? "It is evident at once that the resultant motivation for every task would be undesirable for him/her. This person would want to avoid all the tasks. Competitive achievement situations are unattractive to him/her" (Atkinson & Feather, 1966:17).

Alderman (1999) adds that some individuals believe that success is an outcome of ability, and failure is caused by a lack of ability. All these individuals protect themselves from competitive situations to avoid failure or a perceived lack of ability; their beliefs are usually triggered by some past performance and are mostly untrue. Many learners feel that if they strive towards their goals and work hard, they will be successful. The key here is an effort; more effort has a higher probability of success (Leondari, Syngollitou and Kiosseoglou, 1998). Alderman (1999) has put forth the ability and effort of the individual as the recurring reasons for success and failure in achievement contexts.

Efficiency tends to raise with successes and is lowered with failures. Personal experience is one of the most dominant sources of efficacy information. Atkinson and Feather's (1966) studies with regard to the probability of success share the idea that individuals who are "motivated to achieve should prefer a moderate risk. Their level of aspiration will fall at the point where their positive motivation is the highest, at the point where the probability is around 50 – 50." A learner whose achievement motive is stronger should set his need or drive to succeed in the intermediate zone as it offers only moderate risk. On the contrary, the learner whose motive to avoid failure is stronger should select one of the easiest alternatives or should be extremely speculative and set his goals where there is no probability for failure.

1.4.3.4 Perception of Outcome

According to Keefe and Jenkins (1993), reliable human achievement or outcome is marked by the following factors – "being significant, worthwhile, and meaningful in the lives of successful individuals from all walks of life – artists, business people, and others. Authentic academic achievement should concern itself with accomplishments that are significant, worthwhile, and meaningful especially for learners preparing for adulthood." Jenkins believes that learners are born motivated to learn. A learner enters Kindergarten possessing this enthusiasm for learning. It is the mentors and educators who should motivate young learners to learn and perform tasks better. The educators have an obligation of eliminating the factors responsible for the loss of innate enthusiasm. Making learners responsible for their academic outcomes, i.e. taking ownership of their ideas and projects increases achievement motivation. Nurturing ownership in young learners will develop a sense of responsibility, pride, and motivation to succeed (Atkinson, 1999). Studies done by VanZile-Tamsen and Livingston (1999) show that learners who strive for a better outcome put forward more effort and attempt

at different strategies to accomplish the outcome. High achievers work even harder by figuring out different resources to achieve success.

1.4.4 Extrinsic Motivation in Differently Abled Learners

The intrinsic and extrinsic motivational cues are interrelated in case of learners who are differently abled. The extrinsic factors such as rewards, punishment, and social support are considered as motivational cues (Sprick et al.,1998). According to Bradley and Cecil (2003) some of the examples of extrinsic factors enhancing motivation are 'primary objects, tangible objects, token systems, social approval, and project activities.'

Deci and Ryan (1992), were persistent about their arguments on tangible rewards and their usage, stated, "Although rewards do tend to be controlling, the context within which they are administered has an important influence upon how they are experienced and thus upon how they affect intrinsic motivation" (p. 22). As in the case of learners who are differently abled, positive feedback in the form of extrinsic rewards boost their intrinsic motivation levels and is of utmost importance in enhancing their need for achievement (Carlson & Tamm, 2000). Deci et al. (1999) found that verbal rewards (positive feedback), which is a form of extrinsic reward, had a positive effect on intrinsic motivational levels of individuals. Deci et al. (1999) also argue that when rewards are taken as informational like positive feedback, it affects a person's autonomy and competence leading to a higher need to achieve. Gail D. Heyman in his study "Talking about success: Implications for achievement motivation" (2008) found that there is a significant influence of verbal instructions on learners' performance in a classroom on their internal ability conceptions. Learners who are verbally motivated about their skills in the classroom tend to work towards completing tasks on time. Eisenberger et al. (1999) adding on to the view of Deci et al. (1999) points out that rewards might increase or decrease or have no effect on the need to achieve of the individuals. The effect of positive feedback as an extrinsic

reward in a classroom significantly depends on how the teacher delivers it. Training the learners on Achievement Motivation or on the motives of achievement to improve the learners' competence without practicing and developing all the essential psychological components will not result in an expansive growth; and as ADHD learners face psychological challenges, this won't prepare learners to face the urbane challenges which are extremely necessary. Teachers or primary caregivers should develop learner specific or environment specific methods of implementing the achievement motivation training. (Meece et al., 1990; Steinmayr & Spinath, 2009).

1.4.5 Effect of Positive Feedback on ADHD Learners

One of the ways of implementing achievement motivation training is incorporating positive feedback in the classroom teaching and learning practices. Positive feedback in a classroom is an extrinsic motivating factor which might comprise of praise, tangible tokens, and messages teachers (and parents) communicate to learners with learning difficulties (Such as ADHD), whether intentionally or unintentionally. This can affect students' internal motivation factors, learning goals, and academic outcomes (Hattie & Timperley, 2007; Klassen & Lynch, 2007). The timing of the feedback is crucial for learners facing learning difficulties. According to Brookhart (2008), "The feedback should be given as soon as possible while the student is either working on the task or has just finished it for optimal effectiveness. In fact, feedback for students with learning difficulties should occur while they are still mindful of the task and are still striving to complete a learning goal."

In a traditional classroom, ADHD learners experience sensory overload which distracts or minimizes the attention and results in inattentiveness (Greenspan, 2006). Learners with ADHD find the set goals and tasks difficult to complete as it is impossible for them to channel their concentration on a set objective due to which their academic performance is disorganized.

A learner with a predominantly inattentive subtype of ADHD, experiences difficulty in following teachers' instructions and rules, focussing on task and completing the given work. They frequently misplace books, stationery, and other school supplies needed to complete class work (DuPaul et al., 2006). The inattentiveness can be reduced if the learners are driven by the need to achieve their goals. In the case of learners with ADHD, positive feedback is regarded as one of the crucial psychological factors defining academic and occupational success (Carr et al., 2002). Brophy in his 1998 study says 'extrinsic rewards, such as token-economy systems, effectively decrease disruptive or inappropriate behaviour while increasing attention to academic tasks' which ultimately improves ADHD learner's achievement in tasks.

According to Grolnick and Ryan (1990), from their study on elementary students, learners with learning disabilities have less internal control over academic behaviour. They argued, "students with leaming disabilities require more external control" which should include a higher level of extrinsic motivation such as praise (positive feedback) to improve their academic behaviour. Cameron and Pierce (1994) conducted a meta-analysis on 100 studies involving the use of rewards. The results show that participants who were rewarded showed higher intrinsic motivation than non-rewarded participants. In addition, they found that students who received frequent verbal praise or positive feedback on their tasks showed significantly higher intrinsic motivation in the results when measured by both times on task and attitudes than those students who received no frequent verbal praise. Their study concluded that rewards (verbal and tangible) improve motivation which has a positive effect on students' academic activities and do not interfere with intrinsic motivation for low-interest activities.

ADHD learners cannot stay focused on a solitary task; they tend to move from one activity to the other (Barkley, 2006). Teachers find it extremely difficult to achieve the learning objective of a specific lesson from these learners when there are numerous learners in the class. On the contrary, ADHD learners achieve so much when they are monitored one-on-one. They

succeed in regular tasks with an extra effort delivered by the teacher rather than in a class as a whole (Harold & Mayor, 2017). Another factor affecting the achievement motives of an ADHD learner is that he/she might behave inappropriately and impulsively according to the classroom conventions. “They may scream/shout in class or talk to other learners at inappropriate times without foreseeing the consequences of their actions. Temper tantrums are usually exaggerated and not necessarily linked to a specific event or situation” (Barkley, 2006; Diller, 1999; DuPaul et al., 2006). This is extremely challenging for educators as they have to fulfill the objectives of the lesson. The higher the tantrums lower is the rate of achievement. Improving learner performance includes teaching adaptive skills that can be generalized to the learner's environment in and out of the classroom (Carr et al., 2002). For ADHD learners, teachers should reduce the contingent attention given to the student according to the behaviour (Fisher, Ninness, Piazza, and Owen-DeSchryver, 1996). To reduce inappropriate behaviour in the classroom, the teacher has to motivate them to behave appropriately (Grossman, 1990). As the symptoms of ADHD may indicate an inadequate motivational activation in neuropsychology (Mizuno, 2008), recent studies show that effort put in by the ADHD learner is directly proportional to motivational energy to achieve a task (Sergeant, 2000). Thus, an improvement in the performance of ADHD learners was noted with an increase in achievement motivational levels using positive feedback as the reward. A study conducted by Carlson and Tamm (2000) and Konrad et al., (2000) on a group of 22 ADHD learners and 22 non-ADHD learners on a stop-signal task showed that immediate positive feedback on tasks done by ADHD learners improved their performance on the task. Positive feedback had a greater impact on ADHD learners than the non-ADHD learners. Thus, the present study incorporated positive feedback as an important tool for improving the achievement motivation of ADHD learners in the language classroom. This period of implementing the positive feedback by teachers in the

classroom for improving the achievement motivation is termed as 'Enhanced Achievement Motivation Period.'

1.5 Statement of Problem

There have been very few studies conducted on investigating the association between achievement motivation and learner performance in a school setting. There are no learner specific studies especially in the case of ADHD learners and how their achievement motivation level affects their Language Task Performance in a school setting in India.

The previous study conducted by Luman and Sergent in 2005 shows that ADHD learners have a lower desire for success than non-clinical control children. The results of the study show that ADHD learners have a low sensitivity toward reinforcement. The study analysed reinforcement on a total of 1181 subjects, which included both ADHD and control group, using variables like task performance, motivation, and psychophysiology. The study results show that these reinforcement variables had a positive effect on the subjects' task performance which had tests on assessing neuromuscular activity and levels of motivation. Results also indicated that the task performance of ADHD learners had a greater impact compared to the control group. ADHD learners were seen as more welcoming about an immediate positive reply or reward than the control group. But when the third variable psychophysiology is considered, compared to the control group, ADHD learners were less sensitive to reinforcement.

Studies on simple learning tasks (Mclnerney & Kerns, 2003) for ADHD learners show that immediate positive feedback improved performance on a stop signal task in an ADHD group, whereas it did not affect performance in a non-clinical control group. The study had thirty learners with ADHD and thirty learners in the control group, who were asked to complete a 'Time reproduction paradigm' in which their levels of motivation were manipulated. The

study also looked at the subjects' performance by using variables such as working memory and behavioural inhibition. The results showed that learners with ADHD on manipulated levels of motivation performed better than the control group. On the other hand, on 'regular time paradigm,' their performance was lower than that of the control group.

The studies conducted by J.Gut et al. in 2012 show that highly motivated ADHD learners were able to perform as good as Non-Control (NC) group on receptive language and mathematical thinking. This study tried to investigate associations between achievement motivation and performance on mathematical thinking and language skills in children with ADHD and two control groups (clinical control group and non-clinical control group). There was a total of 23 subjects each for each group. The results of this study show that there is a stronger association between performance on receptive language/ mathematical thinking and achievement motivation for ADHD learners than the non-clinical control group. The study shows that highly motivated ADHD learners performed almost at the same level as the non-clinical control group.

Although there have been very few studies on how motivation affects language learning of ADHD learners, there has been no such study done in an Indian context. Having taught in a school with ADHD children, the researcher became interested in studying how language learning can be improved in the Indian context.

Thus, the present study tries to understand the effect of Achievement Motivation (AM) on ADHD learners specifically in the case of Language Task Performance in an Indian context. The study measures the subjects' achievement motivation levels i.e., their achievement thoughts and behaviours in a school setting using Contextual Achievement Motivation Scale (Henceforth abbreviated as CAMS). It has also tried to analyze the subjects' performance in language tasks 'before' and 'after' Enhanced Achievement Motivation Period using a performance measuring questionnaire. A correlation statistic was conducted at the end to

understand if Achievement Motivation and Language Task Performances are connected in an Indian classroom setup.

1.6 Research Questions

The following research questions are analyzed in the study:

a) Does Achievement Motivation have any effect on the Language Task Performance of ADHD learners in an Indian classroom context?
b) Does Achievement Motivation have any effect on the Language Task Performance of Non-ADHD learners in an Indian classroom context?
c) Is there any correlation between Achievement Motivation and Language Task Performance across learner groups?

1.7 Operational Definitions

ADHD Learners: Learners who are diagnosed by a certified psychiatrist into 'Predominantly Hyperactive/Impulsive' subtype using the NICHQ Vanderbilt Assessment Scales' *(*follows *DSM-5* criteria*).* They fall under the age group of 7-9.

Non-ADHD Learners: Typically developing learners in an Indian classroom. All the learners shortlisted in the non-ADHD group were matched to ADHD learner group on the basis of their social background, age, and gender.

Achievement Motivation: The measurement of achievement motives in learners using the Contextual Achievement Motivation (CAM) scale.

Language Task Performance: Measurement of learners' performance on their language tasks using Performance Measuring Questionnaire. Language Tasks are learning activities designed for learning Parts of Speech in English for learners in the age group of 7-9. They are part of the selected schools' curriculum.

Enhanced Achievement Motivation Period: The period when the teacher gives deliberate enhanced positive feedback to the learners on their language tasks for improving learners' Achievement Motivation. This positive feedback is classified into three parts based on the researcher's observational diary – verbal, non-verbal and material.

1.8 Organisation of the Study

This dissertation consists of 4 chapters. Chapter 1 is on Language Learning and Achievement Motivation in Learners with ADHD. This chapter looks at ADHD and Achievement Motivation in detail. The chapter covers various teaching and learning approaches of differently abled learners especially those specific to ADHD learners. The chapter reviews literature specific to ADHD learners along with the discussion of explored concepts. The statement of Problem and the gaps in the previous studies are identified which helped in raising the research questions. The chapter ends with the operational definition of terms used and the organisation of the study.

Chapter 2 describes the Research Methodology of the study. This chapter comprises research design, description of participants and their selection, procedures and tools for data collection, and statistical procedures for analysing the data.

Chapter 3 discusses the Results of the study. Key findings are presented from the analysis of the data. The findings are based on the quantitative analysis of tests from the questionnaires and the qualitative analysis of the observations done by the researcher in the observer's diary. This chapter is divided into data analyses of ADHD and non-ADHD learners, statistical analysis, and correlation test result.

Chapter 4 discusses the results and concludes the study. This chapter interprets the findings from the previous chapter in accordance with the research questions. The chapter further discusses the pedagogical implications of Achievement Motivation to language learning

of learners with ADHD. The chapter concludes with limitations of the present study and how future research could incorporate other factors determining the concepts discussed in this study.

2. RESEARCH DESIGN AND METHODOLOGY

2.1 Introduction

The present study is Quasi-experimental research concentrating on the effect of Achievement Motivation on Language Task Performance of ADHD learners in an Indian classroom context.

The three main focus points of the study are: a) Understanding the effect of Achievement Motivation on Language Task Performance of ADHD learner group b) Understanding the effect of Achievement Motivation on Language Task Performance of Non-ADHD learner group and c) Understanding the correlation between Achievement Motivation and Langauge Task Performance in the ADHD learner group and the non-ADHD learner group.

This chapter comprises research design, description of participants and their selection, procedures for data collection, and statistical procedures for analysing the data.

2.1.1 Quasi-Experimental Study

The present study follows a Quasi-experimental Pre-test-Post-test Design. Quasi-experimental research is similar to experimental research except in the selection of the sample. In quasi-experimental research too, the independent variable is manipulated, but the participants are not randomly allocated to conditions or orders of conditions (Cook & Campbell, 1979). The current study has participants diagnosed with ADHD who belong to 'Hyperactive' subtype. Random assignment of participants was not possible since the ADHD learners available for the study were very few in number. The variables in the present study are – a) Achievement Motivation which is the independent variable b) Language Task Performance which is the dependent variable and c) Subject Types (ADHD and Non-ADHD) which are the moderating variables.

2.2 Participant Selection

2.2.1 ADHD Learners

As ADHD is a huge domain with multiple subtypes and each subtype varying in the level of symptoms and performance, finalising and affixing to a specific subtype is quintessential in this study as the subjects would be assessed on their language task performance. Thus, there was no random selection of participants by the researcher. The researcher restricted the selection of ADHD learners to the hyperactive subtype as an adequate number of subjects fulfilling the conditions of clinical diagnosis was present only in this category.

The learners diagnosed with ADHD were selected from one of the Hyderabad's Child Development Centres for learners with special needs. The researcher could not select ADHD participants from a regular school because regular schools usually do not classify or diagnose differently abled learners into their specific subtype. The entire domain of differently abled learners is taught as a whole without catering to their varying needs. Unless this condition is diagnosed with verifiable instruments by a certified clinician, it is not possible to identify them merely based on the teacher's opinions.

The Child Development Centre, selected by the researcher, had learners whose special needs were identified by a certified paediatrician and were taught according to their varying needs. English is the medium of instruction at the centre and all the teachers at the centre are trained special educators. Since the study required certified ADHD learner participants, it was challenging to find more participants with similar categorisation and certification due to time constraints for M.Phil. research.

The centre also maintained a detailed student-information record, where parents and teachers filled in information regarding the child's behaviour, motivation, and performance. Thus, the researcher considered the information provided in the record for sample selection.

The researcher had to cross check the information about the learners given in the student-information record from the centre with that of the paediatrician's report as both gave specific information on the learners' behaviour and learning styles. This gave the researcher a better understanding about the participants' learning habits. The student-information record also gave the researcher information on the age group of the learners, their social background which included parents' income, parents' educational background and languages spoken at home.

Following the guidelines of ethical conduct issued by the university ethics committee, confidentiality of the information collected, and the privacy of participants were maintained throughout the course of the research. There was no direct diagnosis of ADHD participants by the researcher. Those participants, who were pre-diagnosed by a certified clinician were only selected. The university ethics committee approval was also taken prior to the data collection procedure (See Appendix 5). Prior to the participant selection from the centre, a confidentiality agreement (See Appendix 6) between the management and the researcher was signed specifying to use the data only for academic purpose. As research involves learners diagnosed with ADHD; participants, parents, and teachers were informed about the purpose of the research, its duration, procedures and confidentiality. The participation was completely voluntary.

As there are multiple tools for determining ADHD and each varies in the selection procedure, selecting a specific tool of determining ADHD which has been already used by the paediatrician for the learners of the selected learning centre was one of the criteria for selecting participants. Thus, the ADHD learners, who used the NICHQ Vanderbilt Assessment Scales for determining the ADHD subtypes were only considered for the research.

Thus, after considering all the criteria i.e. the voluntary participation, consent from guardians, teachers and the learner himself/herself; participants with the same subtype of

ADHD, researcher shortlisted 5 ADHD learners from the Hyperactive/ Impulsive subtype as satisfactory number of samples were available only in this category, rest of the subtypes were too less in number for the study.

Out of the 5 selected participants, there were 3 girls and 2 boys. The selected participants were in the age range of 7-9 years. Their academic records from the Child Development Centre show satisfactory performance in academic assessments. All the learners had English as their second language in the institution. From the information of the student-record, they had educated parents and belonged to a financially stable social set-up.

Hence, participants were selected using quota and convenience sampling. The quota sampling helped the researcher to shortlist 10 ADHD learners under Hyperactive subtype from a total of 25 ADHD learners at the institution. Convenience sampling helped the researcher to finalise 5 homogeneous learners from the shortlisted 10 Hyperactive subtype of ADHD learners following the criteria of Vanderbilt assessment results, age, and consent. All the 5 learners thus selected were ADHD Predominantly Hyperactive/Impulsive subtype, fulfilling the NICHQ Vanderbilt Assessment Scales. This Assessment scales were developed based on the "*Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)"* criteria.

2.2.1.1 NIHQ Vanderbilt Assessment Scales

The National Institute for Learner's Health Quality (NIHQ) Vanderbilt Assessment Scales are used by clinicians to diagnose ADHD in learner between the ages of 6 to 12.

This tool is envisioned for use by the clinician, helps establish the various elements of information required for the diagnosis of ADHD: "1) patient history; 2) pertinent physical examination including vision, hearing, and neurologic screening; 3) data from the assessment scales." This form also assists in ensuring that the learner receives a treatment plan, appropriate referrals, and a follow-up appointment. This is from "*American Academy of Paediatrics and*

National Initiative for Children's Healthcare Quality, 2002". It provides the guidelines for clinicians to use NIHQ Vanderbilt tool and diagnose ADHD among learners. The clinician can personalise and adapt this tool to fit his/her own practice and subjects.

A learner must meet DSM-IV criteria for a diagnosis of ADHD to be appropriate. To confirm a diagnosis of ADHD, these behaviours must:

a) "Occur in more than one environment e.g.: home, school, other social circumstances
b) The gradation should be higher in the learner than any other learner of his/her age
c) Begin onset before the learner reaches 7 years of age and continue on a regular basis for more than 6 months
d) Significantly impair the learner's academic (school environment) and social obligations
e) Symptoms shouldn't match other impairments"

The NIHQ Vanderbilt Assessment Scales' validation studies were for learners in the age group of 6– to 12-years. NIHQ collect information to meet "*Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)"* criteria, they are applicable to other groups, particularly pre-schoolers, here DSM-5 criteria are still suitable.

Previous study done by Mclnerney & Kerns, 2003, had utilised this tool in the assessment of ADHD learners for their study on simple learning tasks. These scales should not be the sole criteria to make a diagnosis of ADHD without confirming and evaluating the information with interviews with at least the primary caregivers (usually parents) and patients. The student-information forms from the learning centre on the learner history helped the researcher in finalising the subjects. Thus, the researcher selected only those learners in the ADHD 'Hyperactive' subtype who fulfilled all the criteria discussed here.

2.2.2 Non-ADHD Learners

The non-ADHD group was selected as the baseline for the research. The learners were selected from one of the schools in Hyderabad. The non-ADHD learner group was selected from class 4 learners between the age group of 7-9 years. The subjects do not have ADHD assessing test in the institution and therefore the researcher selected the subjects based on teachers' assessment reports and demographic details. The non-ADHD group need not be in good health and their health profile is not necessary for a quasi-experimental study (Grimes, 1989; Schulz, 2005). These subjects overall class performance remains satisfactory according to the teacher reports.

The researcher and the management of the institution signed a confidentiality agreement stating the data to be used only for academic purpose. The participation was voluntary and only those participants were considered for selection whose parents/ guardians and language teachers agreed to be part of the study. The learners shortlisted also gave verbal consent. The learner performance report of these learners was collected by the researcher to understand their general performance in class. All the learners shortlisted were matched to ADHD learner group on the basis of their social background, age, and gender. Except for the ADHD factor, the researcher tried to match all other factors so as to have a final correlation study of Achievement Motivation levels and Language Task Performance between the two subject types. This would help the researcher understand whether there is a connection between ADHD and Achievement Motivation. The academic records of the non-ADHD learners were shared with the researcher by the teachers. The class average level performers with positive consent were selected accordingly for the study. The two groups were matched on age (Between 7 to 9 years) and sex (3 girls and 2 boys in both the groups). Convenience sampling was used to identify 5 non-ADHD learners from Hyderabad's educational institution. The non-ADHD sample was matched to the ADHD sample of learners.

2.3 Data Collection Tools

2.3.1 Observer's Diary

Throughout the execution of the study, the researcher maintained an observer's diary which contributed to analysing the data. The observer's diary was divided into three sections – Pre-test, Enhanced Achievement Motivation Period and Post-test. Observations on all the three language tasks for each learner were noted in the diary. This helped the researcher in understanding their Achievement Motivation Levels and Performance levels in language tasks better. The tasks, instructions, and responses given by the teacher and the learners were noted down in the observer's diary.

2.3.2 Contextual Achievement Motivation Scale (CAMS)

The pre-test and post-test in this study consist of two sets of questionnaires for measuring achievement motivation levels and language task performance across the two subject types. CAMS questionnaire (See Appendix 1) and Performance measure questionnaire (See Appendix 2) are thus answered by the respective language teachers according to the guidelines given by the researcher and followed by the researcher's statistical analysis of the data.

The Contextual Achievement Motivation Survey items are based on the Achievement Motivation Theory developed by David McClelland and his colleagues. McClelland (1961) described achievement motivation as strive for success, evidenced by persistence and effort in the face of difficulties. McClelland (1961) identified the following thoughts and behaviours that characterized a high achieving individual (Cueva, 2006; Smith, 2011; Arora, 2015). The CAM Survey items consider the four main features of AM which are - need to achieve, fear of

failure, odds of success and perception of outcome. This can be further divided into subfactors, which are:

1. *"Achievement Imagery (AI)*—A desire for excellence that can be revealed through one of the following: Competition with others (CO), Competition with self (CS), Unique accomplishments (UA), Long-term involvement (LTI).
2. *Need (N)*—Deeply wanting to achieve something.
3. *Action (ACT)*—Planned action toward achieving excellence.
4. *Hope of Success (HOS)*—Expecting success before it is achieved.
5. *Fear of Failure (FOF)*—Worry about failing before it happens.
6. *Success Feelings (SF)*—Good feelings after success.
7. *Failure Feelings (FF)*—Bad feelings after failure.
8. *World Obstacles (WO)*—World obstacles interfering with success.
9. *Personal Obstacles (PO)*—Personal obstacles interfering with success.
10. *Help (H)*—Help sought and obtained to achieve success."

The CAM questionnaire used in this study was developed after the initial validation process of the Achievement Motivation Inventory by Robert L. Smith in 2014. The original inventory consisted of 57 items with response options given on a Likert scale consisting of five options - *Never, Sometimes, 50%, usually,* and *always.* This questionnaire considers the theoretical framework given by McClelland (1961) and the environmental settings of individuals. Robert L. Smith developed CAMS at the Michigan University considering literature findings and revision by panel of experts.

Though this instrument specifically assesses the level of achievement in specific settings including school, work (employment), family, and community activities, this study focuses mainly on the school setting as the questionnaire is filled by the teacher. This survey

has a second part which helps us measure Achievement motives which cover the four features - need to achieve, fear of failure, odds of success and perception of outcome.

The Cronbach alpha for the scores on the sub-scales was reported as- 0.7 (School and Achievement thoughts and behaviours). Based on this out of the original 57 items in the survey, 30 were retained.

2.3.3 Performance Measure Questionnaire

The Performance Measure Questionnaire is inspired by the strategies of self-regulatory learning (Zimmerman, 2002; Perry et al., 2006). These studies divided learning into the following stages: Test anxiety, rehearsal, organisation, elaboration, critical thinking, metacognition, effort regulation, help-seeking, peer learning, time/study management, and concentration. These stages of learning are monitored using the strategies in performance which ultimately results in the outcome of performance. They divided the strategies for performance into three categories. They are a) Personal: outlining and highlighting information b) Behavioural: self-evaluation and self-reinforcement c) Environmental: resource management and eliminating distractions. These strategies for performance are considered reflective in nature and should be incorporated into learning according to the learner needs. These strategies were considered apt in case of learners who are differently abled as they gave these learners the platform to assess their performance according to the strategy they have chosen (Graham & Berman, 2012).

Thus, based on the ADHD learner group and the chosen language tasks on parts of speech, the researcher developed the Performance Measuring Questionnaire. The performance questions are based on the self-regulatory learning stages and performance strategies. The questionnaire has 10 questions based on a 7-point Likert Scale – 1- Always Disagree 2- Mostly Disagree 3- Slightly Disagree 4- Sometimes Agree/Disagree 5- Slightly Agree 6- Mostly Agree

7- Always Agree. The Cronbach alpha for the scores for performance on the sub-scales was as 0.6 before the assessment of Achievement Motivation and 0.7 after, hence validating the questionnaire and the individual items.

2.3.4 Demographic Form

The demographic forms were collected from the respective institutions under the confidentiality agreement. These are institution specific forms prepared by the institution for understanding the learner history. The demographic information improved the sample description and helped identify variables that might influence the research findings. The forms included the performance of the learners in the previous grade. The researcher used the information for finalising the subjects. The class average level learners who performed language tasks evenly were selected. The demographic form for the non-ADHD group included information on age, gender, student status (junior, middle school, senior), the annual income of parents and their educational background and previous years' GPA. In case of the ADHD group, the form included – social skills difficulty profile, child case history form, social behaviour profile, educational history, home behaviour profile, and health and development profile from prescribed doctors.

2.3.5 Pearson Correlation Coefficient

The final research question on understanding the relationship between Achievement Motivation and Language Task Performance based on the subject types was analysed using the Pearson Correlation Coefficient.

Pearson Product Moment Correlation (PPMC**)** shows the linear relationship between two sets of data. The correlation coefficient is comprised between -1 and 1:

- "-1 indicates a strong negative correlation: this means that every time x increases, y decreases
- 0 means that there is no association between the two variables (x and y)
- 1 indicates a strong positive correlation: this means that y increases with x"

2.3.6 Likert Score Calculation

To accurately analyse the two data sets, the measurement scale represented by each data set i.e. a) Achievement Motivation Contextual Scale Questionnaire, b) Performance Measure Questionnaire, was analysed using Likert Scale calculation. The first Data set on CAMS used 30 questions with five response alternatives: (1) Never (2) Rarely (3) Often (4) Mostly (5) Always. The second Data set on Performance Measure Questionnaire had 30 questions and was based on a 7- point Likert scale with alternatives: 1-Completely Disagree 2- Mostly Disagree 3- Slightly Disagree 4- Slightly Agree 5- Mostly Agree 6- Completely Agree. Numbers assigned to Likert-type items express a "greater than" relationship. Because of these conditions, Likert-type items fall into the ordinal measurement scale. A descriptive statistical analysis is conducted for these ordinal measurement scale items including mode-median calculation and Likert score calculation. Likert score = Sum of the scores/Total number of questions in the questionnaire. Likert Percentage = Likert Score/No. of scales given for assessment (5-point scale/7-point scale).

2.4 Research Design and Execution

The study follows a quasi-experimental pre-test-post-test design. It has utilised the quota-convenience sampling for participant selection. There is no random assignment of participants to conditions as the study has ADHD hyperactive subtype and Non-ADHD learner group. The study explores the effect of Achievement Motivation on the Language Task

Performance of ADHD and Non-ADHD learners who learn English as their second language (L2) in an Indian classroom context. The variables in this are classified as follows - Achievement Motivation is the independent variable, Language Task Performance is the dependent variable and Subject types – ADHD and Non-ADHD learners are the moderating variables.

Prior to the pre-test, the researcher attended and observed a few language sessions conducted for the learners in the Child Development Centre. This helped the researcher in familiarising the teaching and learning practices at the centre. It gave a detailed understanding of the language lessons and how the learners learned various topics.

Pre-test and post-test in the present study involved a total of four tests, each for each subject type. The pre-test comprises two tests for each learner. The tests are in the form of questionnaires. The researcher also maintained an Observer's Diary during the course of the study. The detailed description of positive feedback given by teachers according to the learners' task performance and learner's response to feedback and tasks are described in detail by the researcher in the Observer's Diary.

The researcher remained as an observer in this study and did not intervene in the language tasks performed by the learners in both the groups. Keeping in view of the learners' age-group and diagnosed condition, the teachers at the institution answered the questionnaires on behalf of the learners. The teachers in this centre are special educators trained in the field of teaching differently abled learners and are certified to conduct assessments. The variables – Achievement Motivation and Language Task Performance of the subject types are thus measured by the teachers using the questionnaires based on the guidelines given by the researcher. The responses were then statistically analysed by the researcher.

As non-ADHD is the baseline, the researcher continued to remain as an observer. The variables in case of a non-ADHD group of learners were measured by secondary-level trained English language teacher of the institution.

The first test began with the teacher assessing the independent variable - Achievement Motivation levels, for the ADHD learners. The guidelines and framework for the answering the questionnaire were conveyed to the teacher by the researcher. This is measured using the CAMS which is a questionnaire based on a 5-point Likert scale.

This is followed by the second test, measurement of the dependent variable - Language Task Performance, which comprises three language tasks designed for the selected group of learners. These language tasks are based on identification and learning of Parts of Speech in English (POS). Each learner is observed separately on each language tasks and is then marked according to their performance by the respective teachers using a Performance Measuring Questionnaire. This questionnaire is based on a 7 -point Likert scale. The same tests were then replicated for the baseline, non-ADHD learners.

In between the pre-test and post-test, there is an Enhanced Achievement Motivation Period, or the Positive Feedback period assigned to learners of both the groups where the teacher motivates the learner using verbal, non-verbal and material cues. The researcher helped the teachers understand the benefits of positive feedback and the way it enhances the learning, especially in case of ADHD learners. The institutions selected for the study followed the separate format for motivating learners in the classroom and was more generic in nature. To attain uniformity between subject types over the course of the study, the researcher suggested the teachers in both the institution to follow the three types of motivational cues following the four key factors of Achievement Motivation which are– The need to achieve, the fear of failure, the odds of success and perception of outcome. Thus, after attaining uniformity in the way the

teachers from the institutions gave feedback, the researcher classified the motivating elements used by the teacher into a) material motivation – giving stickers or chocolates for the right answer b) verbal motivation which is approval initiated by the teacher or peers which is mostly verbal praise and c) non-verbal motivation – use of gestures like clapping, high-five and others.

The responses of teachers and students during the 'Enhanced Motivation Period' was recorded by the researcher in the Observer's Diary. The questionnaire responses by teachers for ADHD and non-ADHD learners from the pre-test and post-tests are thus collected by the researcher for statistical analysis. These observations from the Observer's Diary helped the researcher to corroborate the statistical analysis.

The reason for selecting only the parts of speech aspect of English Language was that the subjects in the ADHD – Hyperactive subtype face trouble in concentration and sustaining their attention for a continued period. The selected three tasks on Parts of Speech in English incorporates learning techniques to keep the ADHD learner group interested in concepts taught in the classroom. These activities are based on the curriculum developed by the same learning centre for learners with special needs under the guidance of clinical psychologists. These tasks involved a lot of movement for learners with ADHD. Lengel and Kuczala (2010) convey the same idea that movement allows learners to refocus and strengthen their ability to pay attention to. This research too has selected activities which incorporated movement while learning parts of speech. The age group of the learners also restricted in selecting complex language assessments.

The second institution of the experiment from where the non-ADHD group was selected had very similar exercises of teaching parts of speech in English. This helped in analysing the final research question, as it helped the researcher understand the correlation

between Achievement Motivation and Language Task Performance using a correlation design against subject types.

Here is the description of language tasks based on Parts of Speech in English used for measuring Language Task Performance of subject types:

Task 1: Nouns – This task is on learning naming words or nouns. The learners have to identify the names of different animals followed by identification of their respective colours. The task is completed by the learner by spelling out the name of the animal as well as its colour. The teacher gives cue cards with animal figures to the learners. Learners identify and name the animals on these cards. They are then asked to spell it out and enact the animals. If they fail to identify the animal, the teacher imitates the sounds of each animal initiating an easier way of identification for the learners. The teacher after this revises the colour names identified by the learners.

Task 2: Verbs – This task is on the identification of action words or verbs. In this task, the learner sings and moves according to the teacher's instruction. The teacher uses different songs for portraying different animals and different animal movements. The teacher conveys that movement words are called verbs. The learner learns different action words by imitating the action of the animal or the noun being described in the song. The songs have sentences like – The caterpillar crawls up and down the hill; The elephant stomps on the ground; The duck paddles in the water; The water falls from the hill; The rainbow shines in the sky and others.

Task 3: Prepositions – In this task, the learner identifies prepositions. In this task, the teacher uses a pre-set questionnaire on prepositions. The questions here are mostly related to the previous activity of learning verbs. The sentences in the songs are repeated which uses a preposition. Learners complete the questionnaire using apt prepositions. The examples are: The

caterpillar crawls up and down the hill; The elephant stomps on the ground; The duck paddles in the water and others.

In the post-test, the same tests are repeated for both the subject types after the Enhanced Achievement Motivation Period. The language tasks remain the same in the pre-test and post-test which is before and after the Enhanced Achievement Motivation Period. The learners are assessed after two weeks by their language teachers on their performance in the same language tasks using the same set of questions in the questionnaire. The data is then statistically analysed by the researcher.

A correlation design was deployed at the end to determine how the linguistic performance in English of learners with ADHD and non-ADHD would compare against achievement motivation. The study tries to mimic and restate Creswell's definition of correlational designs: "the tendency or pattern for two (or more) variables or two sets of data to vary consistently"

The entire study thus tries to understand the causal relationship between Achievement Motivation and Langauge Task Performances across ADHD and Non-ADHD group of learners.

2.5 Data Analysis

To start with, the scores of CAMS and performance of both the ADHD group and the non-ADHD group were calculated on a Likert scale and the before and after Enhanced Achievement Motivation Period scores were compared and contrasted. The Likert scales were then analysed, and the means and modes of the scales were tabulated and graphed along with the Likert scales.

The observations made by the researcher in the Observer's Diary are qualitatively analysed using the four motives of achievement motivation. The positive feedback given by the teacher and its effect on learner's tasks were observed and compared to the responses in the CAMS questionnaire. This qualitative description helped the researcher in corroborating the quantitative data score from the questionnaires. For the analysis of significance between the achievement motivation and performance of the non-ADHD group and the ADHD group, a multivariate mixed model analysis (a combination of MANOVA with a mixed model) was conducted. Multivariate analysis was considered as the study looked at the differences between Achievement Motivation and Language Task Performance of both ADHD and non-ADHD learners. Here the dependent variable Language Task Performance was plotted against Achievement Motivation amongst the two subject types. Also, a mixed model was considered over a regular MANOVA as the mixed model approaches have specific advantages over regular multivariate ANOVA (MANOVA) techniques; as in, the approach would help account for the randomness of some of the variables while incorporating the fixed variables. The final correlation study between Achievement Motivation and Language Task Performance was analysed using the Pearson Correlation Coefficient test.

3. RESULTS

3.1 Introduction

The objective of the study is to understand how Achievement Motivation plays a role in Language Task Performances of learners diagnosed with ADHD. The study is divided into three phases: a) Understanding the effect of Achievement Motivation on Language Task Performance of ADHD learner group b) Understanding the effect of Achievement Motivation on Language Task Performance of Non-ADHD learner group and c) Understanding the correlation between Achievement Motivation and Langauge Task Performance in the ADHD learner group and the non-ADHD learner group.

The chapter is divided into sample description, data preparation and data analyses, statistical analysis, and results.

3.2 Sample Description

The samples in this study comprise of two groups of learners: learners who were identified as ADHD subtype 'Predominantly Hyperactive/Impulsive' and Non-ADHD learners in a classroom. All participants were from the schools in Hyderabad. The participants in each group were matched on their socio-economic, gender, age group, and academic performances. The teachers on behalf of the subjects answered the following questionnaires: CAMS Questionnaire, Performance Measuring Questionnaire. The data was collected from 10 participants. The Demographic Measure forms collected from the respective participant institutions. The clinical results of the ADHD participants were also collected. The researcher maintained an observer's diary observing the instructions and responses of teachers and the learners.

3.3 Data Analysis

The research design is a quasi-experimental pre-test-post-test design. The pre-test incorporates assessing the level of Achievement Motivation and the initial level of Language Task Performance of learners in both ADHD and Non-ADHD group by using a set of questionnaires. The treatment period in this design which is the Enhanced Achievement Motivation Period which is recorded by the researcher in the observer's diary. This is followed by the post-test which repeats the same set of questionnaires as in the pre-test for the same kind of language tasks. Based on their scores in the questionnaires in the post-test in comparison with the pre-test scores, the researcher can find the effect of Achievement Motivation in Language task performances of ADHD learners. This score is then compared with that of the Non-ADHD Group.

The teachers assessed the participants using the following questionnaires: a) Achievement Motivation Contextual Survey (CAMS), b) Language Task Performance Analysis. The Enhanced Achievement Motivation Period descriptive data was noted down by the researcher using the observer's diary. The diary recorded the instructions given by the teachers and responses of the learners over the span of Enhanced Achievement Motivation Period which was two weeks each for the ADHD group and Non-ADHD group. In the span of two weeks, the motivating factors incorporated by the teacher in the lessons can be broadly classified into a) material motivation – giving stickers or chocolates for the right answer b) verbal motivation which is approval initiated by the teacher or peers which is mostly verbal praise and c) non-verbal motivation – use of gestures like clapping, high-five and others. These elements seem to affect the four factors of Achievement Motivation: the need to achieve, the fear of failure, the odds of success and the perception of outcome. The learners after two weeks were assessed by their respective language teachers on their performance in the same language

tasks using the questionnaires described. The responses of both these questionnaires were coded and analysed using Likert Score Analyses.

After a span of two weeks, the teacher re-conducts these tests a) Achievement Motivation Contextual Survey (CAMS), b) Language Task Performance Measure and re-assesses the subjects. Finally, a descriptive statistical analysis was conducted for the data set. The data on Performance in Language Tasks, before and after Achievement Motivation for the two groups (ADHD and Non-ADHD), are analysed.

The internal consistency of the Performance Questionnaire was found out using- The Cronbach Alpha coefficient. As the Performance Measure Questionnaire was developed by the researcher, the consistency of the items in the questionnaire was measured using Cronbach's Alpha Coefficient. The coefficient was 0.7203 suggesting that the items have relatively high internal consistency. In statistics, according to the classical test theory, Cronbach's alpha coefficient is a measure of internal consistency which shows how closely related a set of items are in a group. A reliability coefficient of .70 or more is considered suitable in most social science research situations. Therefore the questions in Performance Analysing Questionnaire are reliable. It is a measure of scale reliability.

3.4 ADHD Learner Group

Here is a detailed analysis based on the scores from the CAMS and performance questionnaires. This section is divided into two sub-sections: Achievement Motivation results and the language task performance results.

3.4.1 Achievement Motivation Results

For understanding the Achievement Motivation Levels of learners in the ADHD group, the CAMS questionnaire was repeated in the pre-test before Enhanced Achievement Motivation Period and in the post-test after the Enhanced Achievement Motivation Period to analyse the difference in the results. A Likert score analysis was conducted for both pre-test and post-test responses on the CAMS questionnaires for each learner. Here is a detailed Likert Score Analysis of Achievement Motivation Scores in the pre-test and post-test for each learner.

For Learner 1, the Likert score is 2.17 in pre-test and 3 in the post-test. There is an improvement of 0.83 Likert units. For Learner 2, the Likert score in pre-test is 2.13 and 3.53 in the post-test. There is an improvement of 1.4 Likert units.

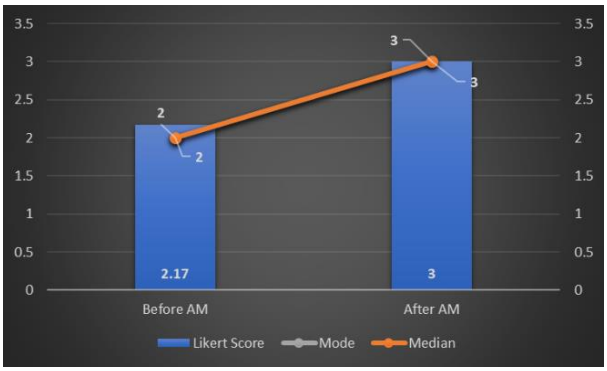

Figure 3.1 Achievement Motivation Score ADHD Learner 1– 'before' and 'after' the Enhanced A M Period

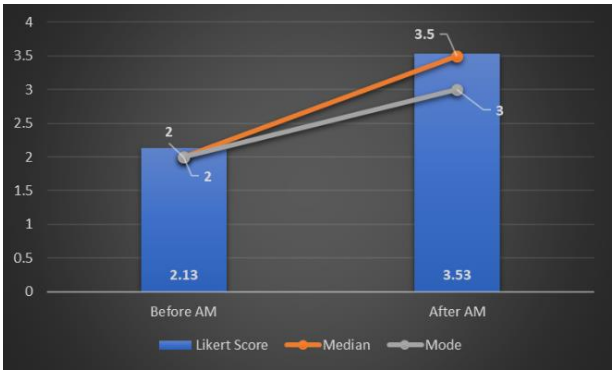

Figure 3.2 Achievement Motivation Score ADHD Learner 2 – 'before' and 'after' the Enhanced A M Period

For Learner 3, the Likert score in the pre-test is 2.1 and, in the post-test, it is 3.5. There is an improvement of 1.4 Likert units. For learner 4, the Likert score in the pre-test is 2.17 and 3.4 in the post-test. The improvement here is 1.23 Likert units. For Learner 5, the pre-test score is 1.93 and the post-test score is 3.63. The improvement here is 1.7 Likert units.

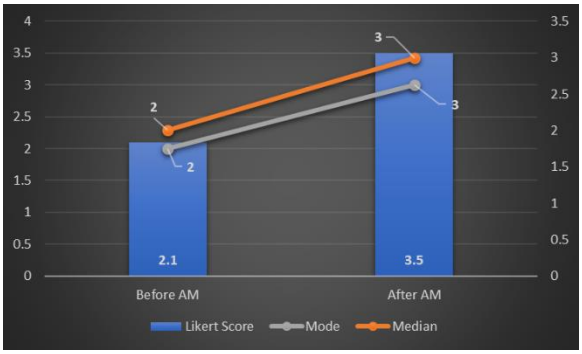

Figure 3.3 Achievement Motivation Score ADHD Learner 3 - 'before' and 'after' the Enhanced A M Period

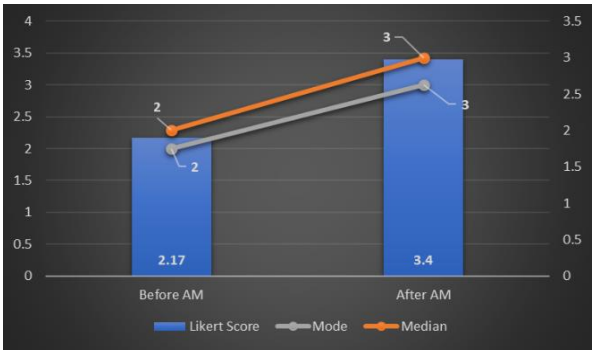

Figure 3.4 Achievement Motivation Score ADHD Learner 3 – 'before' and 'after' the Enhanced A M Period

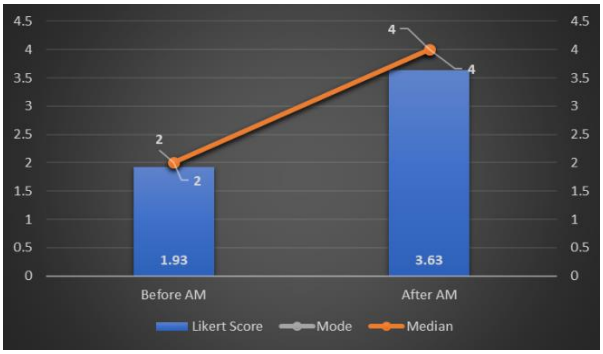

Figure 3.5 Achievement Motivation Score ADHD Learner 5 – 'before' and 'after' the Enhanced A M Period

Here is the summary of Achievement Motivation score of learners in the ADHD group before and after the Enhanced Achievement Motivation Period which extended for a span of two weeks.

Learners	Pre-test scores	Post-test scores	Improvement
Learner 1	2.17	3	0.83
Learner 2	2.13	3.53	1.4
Learner 3	2.1	3.5	1.4
Learner 4	2.17	3.4	1.23
Learner 5	1.93	3.63	1.7

Table 3.1 Achievement Motivation Score Summary ADHD Learner Group – 'before' and 'after' the Enhanced Achievement Motivation Period

For all the learners, the AM scores improved significantly in the post-test after the Enhanced Achievement Motivation Period. The average Likert percent for the entire group of 5 learners improved from 30% to 48.71%

AM Score	Mean Likert Score	Mean Likert%	Median	Mode
Before	**2.1**	**30%**	**2**	**2**
After	**3.41**	**48.71%**	**3**	**3**

Table 3.2 Achievement Motivation Likert Score Summary ADHD Learner Group – 'before' and 'after' the Enhanced Achievement Motivation Period

3.4.2 Language Task Performance Results

The three language tasks selected for the assessment are – Tasks on learning Parts of Speech in English (POS) a) Learning Nouns b) Learning Verbs c) Learning Prepositions. In the pre-test, before the Enhanced Achievement Motivation Period, these three tasks were conducted by the language teacher and assessed using the Performance Measuring Questionnaire. The scores were noted for each learner, for each task. The two weeks Enhanced Achievement Motivation Period, after pre-test and before post-test, is assigned to learners of both groups where the teacher motivates the learner using verbal, non-verbal and material cues. In the post-test, the same set of three language tasks are repeated and assessed using Performance Measuring Questionnaire. The scores are then analysed using Likert score analysis. Here is a detailed analysis of the results for each learner.

Learner 1

Performance on all the three language tasks for learner 1 was analysed on Likert Score calculation. Here, the Likert score percent for Language Task Performance improved from 29% to 62.86% after the Enhanced Achievement Motivation Period.

Pre-test: At the beginning of the language tasks, learner 1 did not show interest in singing or movement for learning verbs and nouns. The learner did not maintain eye-contact and did not follow instructions such as 'Touch your feet,' 'Jump high' and others. But the learner was able to identify the names of animals almost accurately.

Enhanced Achievement Motivation Period (From Observer's Diary): The researcher has classified the entries from the observation diary into the four key factors of Achievement Motivation. These four factors are the baseline of the Enhanced Achievement Motivation Period initiated by the teachers. The researcher thus assessed the learners' performance on the three language tasks based on these four key factors.

The need to achieve: The initial days of Enhanced Achievement Motivation Period saw learner 1 not picking up the right answers for tasks 2 and 3. The learner faced difficulty in identifying the right nouns and action words for animal movements. Over the course of Enhanced

Achievement Motivation Period, the learner started identifying the nouns and verbs correctly. The teacher gave stickers on her notebook after the correct identification of nouns and verbs. The teacher gave high-fives for every right answer in the preposition task. This improved the learner's need to achieve the right answer.

The fear of failure: The learner, in the beginning, was worried about her answers. The learner was seen hiding answers from the teacher which she thought wasn't the answer. During the Enhanced Achievement Motivation Period, the teacher gave stickers on her notebook every time she attempted to answer even if there was an incorrect answer. The teacher gave high-fives for every right answer in all the three language tasks. During the course of two weeks, the learner had the confidence to face questions, even though she wasn't familiar with the answer.

The odds of success: The learner in the beginning, for all three tasks, picked answers including animal names, verbs and prepositions haphazardly. The learner didn't try guessing an animal name from its colour or the verb from the actions. During the Enhanced Achievement Motivation Period, the learner started giving answers. There was a greater probability of a right answer as the learner started differentiating between task 1, task 2 and task 3. The learner understood the three parts of speech and how they cannot be interchanged. Even though the learner wasn't sure of the answer, thinking logically helped the learner pick the most relevant answer. The learner was able to give reasons for picking a specific preposition, verb or noun as the answer.

Perception of outcome: Initially, the learner was reluctant answering all the questions in the language tasks. The moment the learner found a difficult question or was unaware of the answer, she left the task half-way through. The Enhanced Achievement Motivation Period, with teacher's detailed explanation of the instructions specific to tasks and feedback, helped the learner to understand the importance of completing all the three language tasks in the classroom. The learner completed the three tasks on time. She tried to understand the instructions given by her teacher and follow them accordingly. This is reflected in the CAMS questionnaire. She scored the highest (Scores 4&5) in the questions (nos. 14&26) related to the learner understanding the purpose/meaning of the activities done in class (See Appendix 1.a).

Post-test: When the tasks were repeated after a span of two weeks, the learner identified the movement of animals accurately. The learner was observed to be more inquisitive and raised questions if the instructions were not clear. The learner was also happy when her peers motivated her when she completed each of language tasks. The learner was able to use the three parts of speech accurately in her language tasks.

Below is the Likert Score analysis on the learner's performance on all the three language tasks before and after the Enhanced Enhanced Achievement Enhanced Achievement Motivation Period.

Likert Score Calculation (Out of 7 scale)		
Scales	Before AM	After AM
Likert Score (LS) = Sum/30[No. of Questions)	2.03	4.4
% of Likert Score = LS/7	29	62.86

Table 3.3 Learner 1: Likert Score Calculation on Language Task Performance

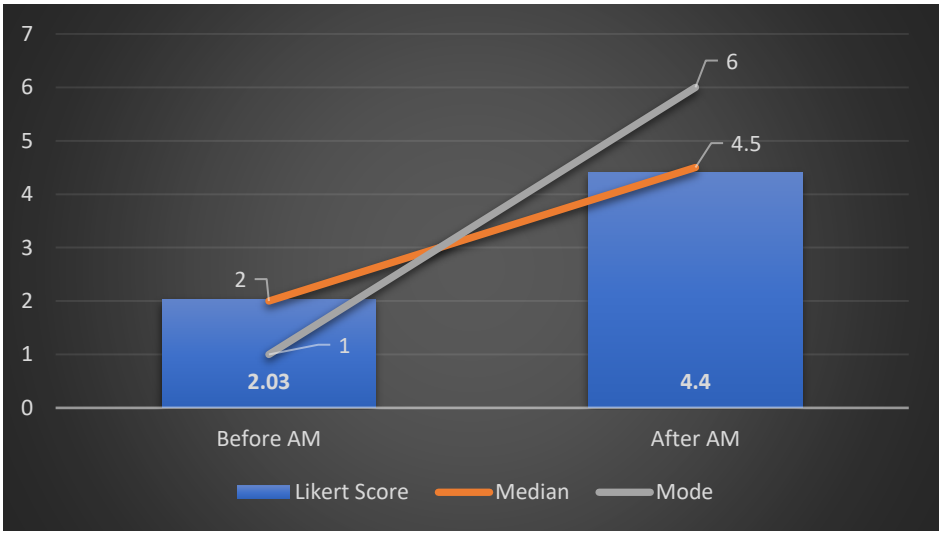

Figure 3.6 Language Task Performance Score ADHD Learner 1 – 'before' and 'after' the Enhanced A M Period

Thus, there is an improvement of 2.37 Likert units in the Language Task Performance of Learner 1, from 2.03 to 4.4 Likert units.

Learner 2

Performance on all the three language tasks for learner 2 analysed on Likert Score calculation.

Pre-test: Learner 2 in the initial observation stage was observed to be hesitant in following instructions. The learner did not pay attention to the action words described by the teacher and ended up picking incorrect verbs for different animal movements. The learner did not spell out the nouns accurately and had spelling errors. The verbal motivation like "Well-done" "Almost there" by the teacher let the learner continue to spell the nouns till she got them right.

Enhanced Achievement Motivation Period (From Observer's Diary):

The need to achieve: In the initial days of Enhanced Achievement Motivation Period, learner 2 was not identifying the right action words for the questions on the movement of animals. Over the course of Enhanced Achievement Motivation Period, the learner started identifying the verbs correctly for which the teacher gave stickers on his notebook. Also, after the initial days of Enhanced Achievement Motivation Period, the learner was eager to move from one task to the other, which clearly indicated the learner's need to achieve answers for the questions raised by the teacher. The teacher gave high-fives for every right answer in all the 3 tasks. This kept the learner engrossed in the language tasks. Thus, in the CAMS questionnaire, the learner moved from a 'score 1' to 'score 4' after this motivation period for the question no.15 on paying attention to tasks in detail – "I can keep my mind on a task for a long period of time" (See Appendix 1.b)

The fear of failure: In the initial days of Enhanced Achievement Motivation Period, the learner left tasks unattended as he was afraid of not getting the right answer. The learner hesitated to say answers out loud when he wasn't sure about the answer. During the Enhanced

Achievement Motivation Period, the teacher also gave stickers in the notebook whenever the learner was hesitant and worried about failing or not getting the right answer. These stickers motivated the learner to try until he figured out the right answer.

The odds of success: The initial days of Enhanced Achievement Motivation Period saw the learner picking up action words for animals as per the order was given by the teacher. The learner failed to answer when the order of the questions was changed. Later, the teacher enacted the actions of animals along with the learner. The teacher also repeated the actions or names of animals when the learner was in doubt. As the Enhanced Achievement Motivation Period progressed, the learner started giving answers in order as per the question. There was a greater probability of a right answer as the learner started differentiating between task 1, task 2 and task 3. The learner understood the three parts of speech and how they cannot be interchanged. Now, the learner was enacting the actions without help from his teacher. He was able to logically able to connect the animals with their movements.

Perception of outcome: Initially, the learner left tasks unattended. When the teacher started giving stickers and high-fives for every time the learner tried, he started to attempt all the questions. Initially, the answers were not right. But the Enhanced Achievement Motivation Period helped the learner to understand the importance of completing all the three language tasks in the classroom. The learner completed the three tasks on time. In the end, the learner was seen keenly listening to the instructions and completing the tasks. The answers improved tremendously.

Post-test: The span of two weeks showed tremendous improvement in the way the learner was performing in all the language tasks. The learner also started asking inferential questions based on the language tasks like “Why does the elephant stomp the ground hard?” while learning the verb stomp. The learner was completing the tasks at a faster rate compared

to the beginning of the observation. Below is the table representing the Likert Score Analysis for the performance in language tasks before and after the Enhanced Achievement Motivation Period.

Likert Score Calculation (Out of 7)		
Scales	Before AM	After AM
Likert Score = Sum/30	2.17	4.53
% of Likert Score = LS/7	31	64.71

Table 3.4 Learner 2: Likert Score Calculation on Language Task Performance

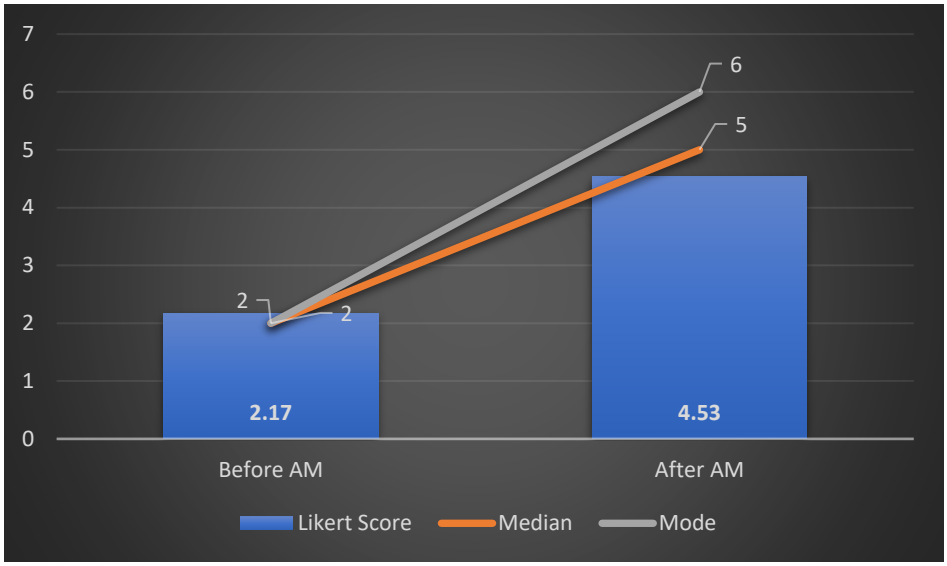

Figure 3.7 Language Task Performance Score ADHD Learner 2 – 'before' and 'after' the Enhanced A M Period

Thus, the Likert score percent for Learner 2 improved from 31% to 64.71% after Enhanced Achievement Motivation Period.

Learner 3

Performance on all the three language tasks for learner 3 analysed on Likert Score calculation. Here, the Likert score percent improved from 32.86% to 64.71% after achievement motivation.

Pre-test: Learner 3 in the beginning of the observation was enthusiastic to perform and answer questions on nouns, verbs, and preposition. The learner faced difficulty in hand-eye-coordination and was performed the movements for action words in a restricted manner. Though the learner could pick the right movement word for the right animal, the corresponding actions performed were different. The learner was also enthusiastic about spelling the colour of animals given in the cue card but was incorrect in identifying different colours.

Enhanced Achievement Motivation Period (From the Observer's Diary):

The need to achieve: In the initial days, learner 3 was facing hand-eye-coordination difficulty. This led the learner to give up tasks halfway through. To prevent this the teacher started doing animal movements along with the learner. This helped the learner to overcome the fear of moving freely and identifying the right movement words. Over the course of Enhanced Achievement Motivation Period, the learner started identifying the nouns and verbs correctly. The teacher verbally motivated the learner whenever he tried to pick up the appropriate noun based on the questions. The teacher also gave stickers in the notebook for identifying the right prepositions. The learner kept trying until he succeeded in getting all the answers right. This is reflected in the CAMS question no. 20 which is "I finish things that I start", where the learners moved from a score 2 to a score 4 (See Appendix 1.c).

The fear of failure: Initially, the learner found identifying colour names difficult. The moment the teacher handed him the cue card with an animal, he threw them away when he couldn't identify the colour. Two weeks of continuous verbal motivation from the teacher

including “Well-done, you’re a star” “You’ve done an amazing job”, helped learner 3 in learning the different Parts of Speech in detail. The learner after the Enhanced Achievement Motivation Period also raised questions when in doubt.

The odds of success: Learner 3 faced difficulty in the hand-eye-coordination leading to wrong choices in picking up movements of animals. During the Enhanced Achievement Motivation Period, the teacher gave stickers in the notebook for every right identification of parts of speech and when the learner moved in order from one question to the other. This compelled the learner to answer in order as per the question. The learner understood to relate each verb to its corresponding animal movement. The learner understood the three parts of speech and how they cannot be interchanged. The learner also raised doubts when the instructions were not clear. This helped the learner complete the tasks better.

Perception of outcome: In the initial days, the learner didn’t realise the importance of completing a task. The learner got lost in his thoughts while answering questions. The teacher clapped each time when the learner answered a question from all the three tasks. The teacher also explained the questions in detail. Towards the end of two weeks, the learner sort help from the teacher or peer whenever in doubt. This helped the learner complete the tasks on time. He tried to understand the instructions given by her teacher and follow them accordingly.

Post-test: After two weeks the learner improved the way he spelled and identified the colours and was also able to use appropriate prepositions in the questionnaire. Below is the table showing the Likert Score Analysis of Learner 3 in language task performance before and after the Enhanced Achievement Motivation Period.

Likert Score Calculation (Out of 7)		
Scales	Before AM	After AM
Likert Score = Sum/30	2.3	4.53
% of Likert Score = LS/7	32.86	64.71

Table 3.5 Learner 3: Likert Score Calculation on Language Task Performance

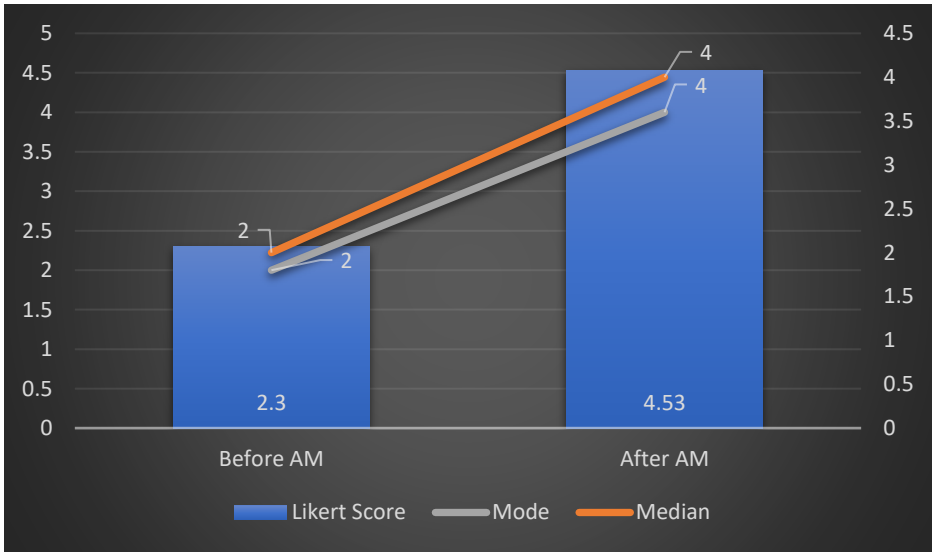

Figure 3.8 Language Task Performance Score ADHD Learner 3 – 'before' and 'after' the Enhanced A M Period

Thus, for Learner 3, the Likert score percent improved from 32.86% to 64.71% after the Enhanced Achievement Motivation Period.

Learner 4

Performance on all the three language tasks for learner 4 analysed on Likert Score calculation. Pre-test: Learner 4 was very inquisitive but had rapid hand movement and did not complete his sentences while speaking. While completing the preposition learning questionnaire, the learner couldn't pick up the right one for the sentences. The songs on animal movements were also not sung completely by the learner. But the learner could identify the colours and spell out them almost accurately. The whole process a lot of time compared to the rest of the learners.

Enhanced Achievement Motivation Period (From Observer's Diary):

The need to achieve: The learner was finding it hard to start answering questions raised by the teacher and did not have a sense of task completion. The learner started the tasks assigned by the teacher but did not complete naming the animals correctly. As the teacher clapped every time the learner completed the task, it kept him motivated to continue the task. During Enhanced Achievement Motivation Period, the learner started identifying the nouns and verbs correctly. The teacher gave stickers on her notebook after the correct identification of nouns and verbs. The teacher gave high-fives for every right answer in the preposition task.

The fear of failure: The learner, in the beginning, was worried about his answers. The learner left preposition question blank every time he thought he was going to make a mistake. During the Enhanced Achievement Motivation Period, the teacher gave stickers on her notebook every time the learner attempted to answer a question from task 3, even if it was an incorrect answer. The teacher gave high-fives for every right answer in all the three language tasks. The Enhanced Achievement Motivation Period of two weeks helped the learner face questions even though he wasn't sure about the answer.

The odds of success: The learner 4 wanted to complete the language tasks from the beginning. But the learner was not able to pay attention to the sequential order of questions. Though, he knew the answers, wasn't able to present them accordingly. During the Enhanced Achievement Motivation Period, the teacher gave high fives and stars in the notebook, each time the learner followed the order of questions asked. There was a greater probability of a right answer as the learner started differentiating between task 1, task 2 and task 3. The learner understood the three parts of speech and how they cannot be interchanged. The learner was also able to give reasons for the answers picked. This motive to succeed and give reasons for his answer was reflected in the CAMS question no. 14 which is "I have a strong desire to be a success in the things I set out to do", where his score improved from 2 to 4, at the end of the Enhanced Achievement Motivation period (See Appendix 1.d).

Perception of outcome: Initially, the learner was reluctant in answering all the questions in the language tasks. Words used by the teacher – "Excellent", "Well done" and others made the learner complete the tasks in order and move on to the next. At the end of two weeks, the learner started logically picking up answers, for example, naming an animal with wings as birds, etc. The learner was able to give logical reasons for the answers he picked.

Post-test: After the span of two weeks and continuous verbal motivation from the teacher, the learner was seen to complete the songs on animal movements till the end. The learner was able to manage time in a better way compared to the beginning in completing questions on prepositions. Peers congratulating him on guessing the right preposition kept him engaged in learning and identifying the right answer. The spellings in spell out the task of both nouns and verbs improved vastly. Below is the Likert Score Analysis table showing the improvement in performance in language tasks for learner 4, before and after the Enhanced Achievement Motivation Period.

Likert Score Calculation (Out of 7)		
Scales	Before AM	After AM
Likert Score = Sum/30	1.97	4.7
% of Likert Score = LS/7	28.14	67.14

Table 3.6 Learner 4: Likert Score Calculation on Language Task Performance

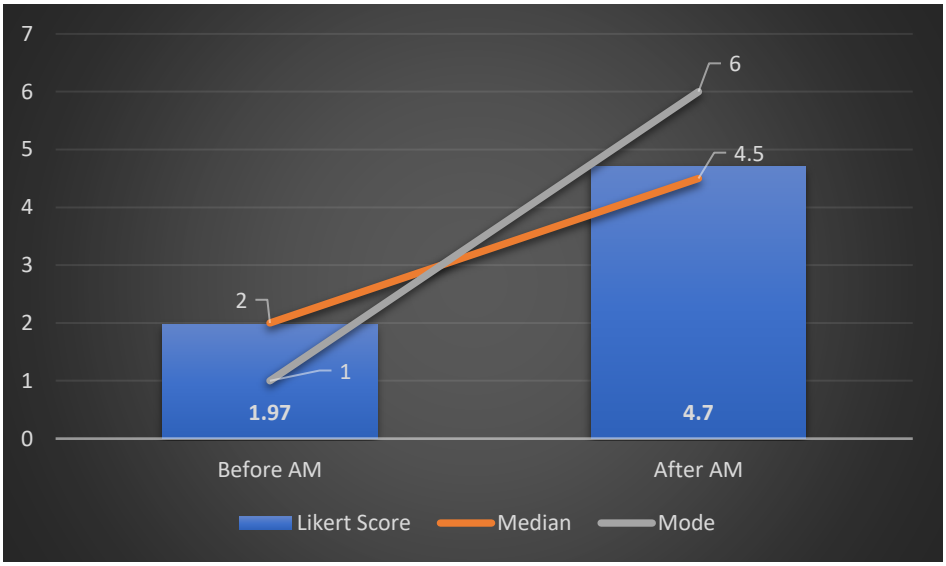

Figure 3.9 Language Task Performance Score ADHD Learner 4 – 'before' and 'after' the Enhanced A M Period

For Learner 4, the Likert score percent improved from 28.14% to 67.14% after the Enhanced Achievement Motivation Period.

Learner 5

Performance on all the three language tasks for learner 5 analysed on Likert Score calculation.

Pre-test: The learner 5 was very lively. He was mostly a Kinaesthetic learner and was able to perform the movements of animals and learn the corresponding nouns well. Identifying the right preposition for the sentences in the questionnaire was a difficult task for him. The learner was able to identify the movement words well but spelling them out was difficult.

Enhanced Achievement Motivation Period (From Observer's Diary):

The need to achieve: The learner was ready to follow the instructions given by the teacher right from the beginning. The learner was able to identify the action words which included the movement of animals. He was able to identify the animal and its movement correctly. Every time, the learner matched the movement with the corresponding animal, the teacher gave him a star in the notebook. His answers improved over the course of Enhanced Achievement Motivation Period.

The fear of failure: In the beginning, the learner was a little sceptical about the questions he did not know. He tried avoiding those questions. During the Enhanced Achievement Motivation Period, the teacher gave stars on his notebook every time he attempted to answer even if there was an incorrect answer. As the learner was finding it difficult to spell out the nouns and verbs given in the question, the stars helped him to keep trying until he figured out the right spelling. The learner also raised doubt to the teacher when in doubt. This ultimately helped the learner in completing the tasks on time. The teacher gave high-fives for every right answer in all the three language tasks. This improvement is reflected in the CAMS question no.18 which is "I have a tendency not to give up easily when confronted with a difficult problem", where the learner moved from a score 2 to a score 5 (See Appendix 1.e).

The odds of success: The learner, in the beginning, did not answer logically to questions from all the three language tasks. The learner didn't try guessing an animal name from its colour or the verb from the actions. During the Enhanced Achievement Motivation Period, the started giving answers in order as per the question. There was a greater probability of a right answer as the learner started differentiating between task 1, task 2 and task 3. The learner understood the three parts of speech and how they cannot be interchanged. At the end, the learner was able to give reasons for the answers he had picked.

Perception of outcome: Initially, the learner was reluctant in answering all the questions in the language tasks. The teacher verbally motivated the learner to use different prepositions in sentences by showing examples. The teacher put the animal cue cards at different locations of the table and asked the learner to identify the positions. Every right answer gained a star sticker in the notebook. This helped the learner to try and figure out the right prepositions in the questions raised. The Enhanced Achievement Motivation Period helped the learner to understand the importance of completing all the three language tasks in the classroom. It helped the learner to try until he came up with the right answer. The Enhanced Achievement Motivation Period also helped the learner to complete the three tasks on time.

Post-test: Teacher's constant verbal and material approval and encouragement helped the learner to perform well after a span of two weeks. The learner improved in the spelling of nouns and verbs. The learner was also able to pick the right preposition for preposition exercise. Below is the Likert Score Analysis for the learner 5 based on the language task performance before and after the Enhanced Achievement Motivation Period.

Likert Score Calculation (Out of 7)		
Scales	Before AM	After AM
Likert Score = Sum/30	2.03	4.57
% of Likert Score = LS/7	29	65.29

Table 3.7 Learner 5: Likert Score Calculation on Language Task Performance

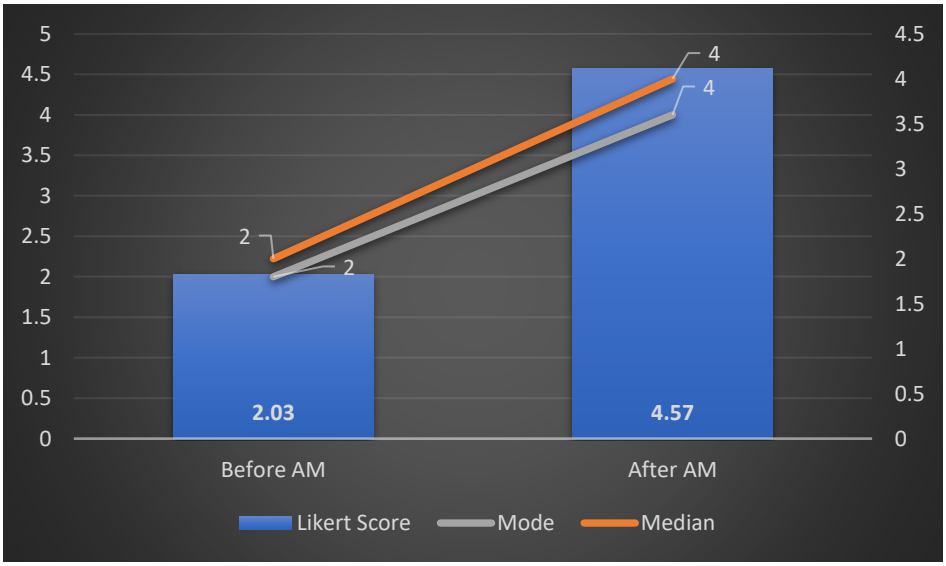

Figure 3.10 Language Task Performance Score ADHD Learner 5 – 'before' and 'after' the Enhanced A M Period

Thus, for learner 5, the Likert score percent improved from 29% to 65.29% after the Enhanced Achievement Motivation Period.

Here is the mean Likert Score analysis on Language Task Performance of all the ADHD learners. The Language Task Performance improved from 30% to 65.57% from before the Enhanced Achievement Motivation Period to after the Enhanced Achievement Motivation Period.

Performance	Mean Likert Score	Mean Likert%	Median	Mode
Before	2.1	30%	2	1
After	4.59	65.57%	4	4

Table 3.8 Likert Score Calculation summary on Language Task Performance of ADHD learners

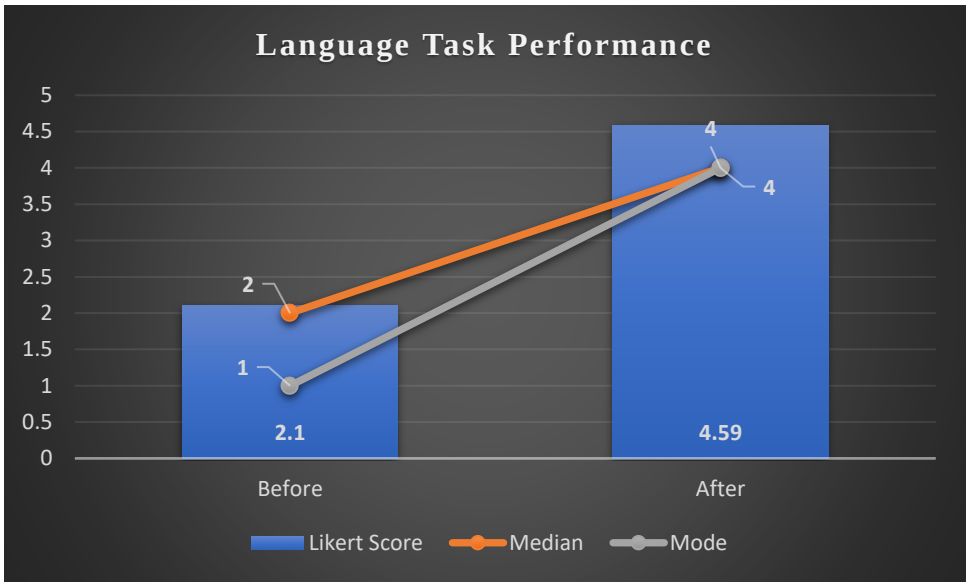

Figure 3.11 Language Task Performance Score Summary ADHD Learner Group – 'before' and 'after' the Enhanced A M Period

3.5 Non-ADHD Learner Group

In the Non-ADHD group too, the learners were assessed on their Achievement Motivation Scores and Language Task Performances in the pre-test before the Enhanced Achievement Motivation Period and in the post-test after the Enhanced Achievement Motivation Period using CAMS and Language Task Performance Questionnaires. Results are thus divided into two sections – Achievement Motivation Results and Language Task Motivation Results.

3.5.1 Achievement Motivation Results

There is a significant difference in Achievement Motivation score before and after the time span of two weeks of Enhanced Achievement Motivation Period in the Non-ADHD group of learners. Likert percent for the entire group of 5 learners improved from 47.71% to 58%. But the difference here is not as significant as the ADHD group in AM levels.

For Learner 1, the Likert score is 3.5 in pre-test and 4 in the post-test. There is an improvement of 0.5 Likert units. For Learner 2, the Likert score in pre-test is 2.13 and 3.53 in the post-test. There is an improvement of 1.4 Likert units.

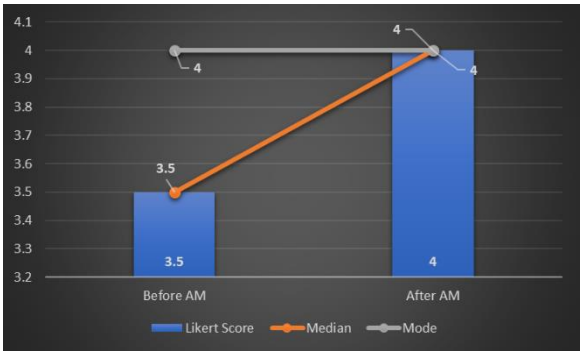

Figure 3.12 Achievement Motivation Score Non-ADHD Learner 1- 'before' and 'after' the Enhanced A M Period

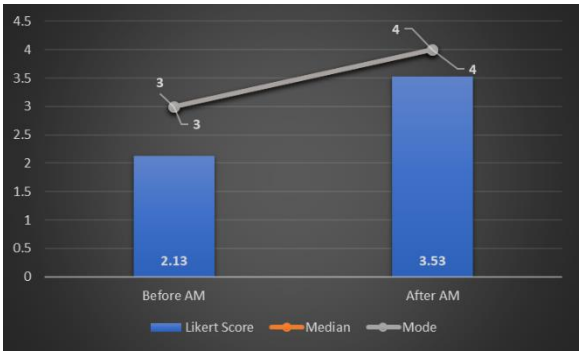

Figure 3.13 Achievement Motivation Score Non-ADHD Learner 2 - 'before' and 'after' the Enhanced A M Period

For Learner 3, the Likert score in the pre-test is 3.2 and, in the post-test, it is 4.1. There is an improvement of 0.9 Likert units. For learner 4, the Likert score in the pre-test is 3.27 and

3.87 in the post-test. The improvement here is 0.6 Likert units. For Learner 5, the pre-test score is 3.3 and the post-test score is 4.13. The improvement here is 0.83 Likert units.

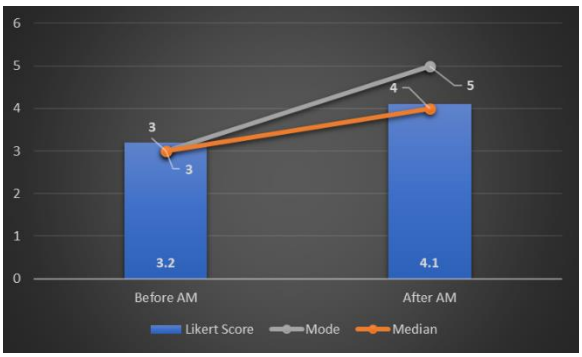

Figure 3.14 Achievement Motivation Score Non-ADHD Learner 3-'before' and 'after' the Enhanced A M Period

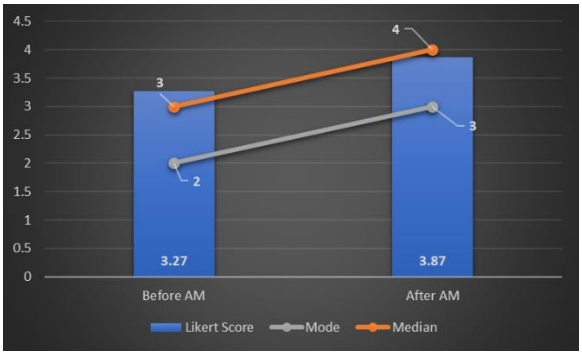

Figure 3.15 Achievement Motivation Score Non-ADHD Learner 4- 'before' and 'after' the Enhanced A M Period

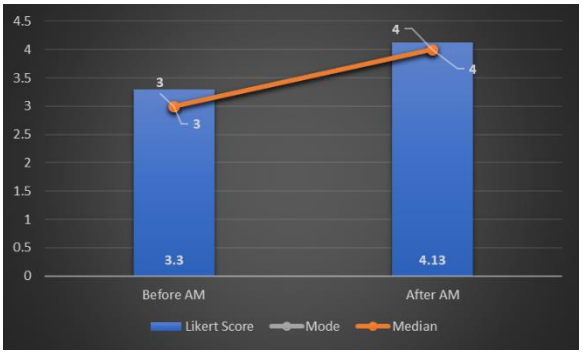

Figure 3.16 Achievement Motivation Score Non-ADHD Learner 5 – 'before' and 'after' the Enhanced A M Period

Here is a detailed Likert Score Analysis of each learner in Non-ADHD group based on their pre-test-post-test AM scores. The Likert score improved from 3.34 units to 4.06 units. Here, the improvement in performance is less than 1. This improvement is not as significant as was in the ADHD learner group.

AM Score	Likert Score	Likert%	Median	Mode
Before	3.34	47.71%	3	3
After	4.06	58%	4	4

Table 3.9 Achievement Motivation Score Summary Non-ADHD Learner Group – 'before' and 'after' the Enhanced A M Period

3.5.2 Language Task Performance Results

The performance in all the three language tasks on English Parts of Speech learning – the learners in the non-ADHD group performed almost as good as they were performing in the beginning. Though they improved their answers in identifying the right prepositions in sentences, spelling out the verbs and nouns and identification of colours, the improvement was not so significant. The results in statistical analysis prove the same. There is not a significant difference in their performance in language tasks compared to ADHD learners. The answers in the language task questions, in the pre-test and the post-test for the Non-ADHD group, almost remained the same even after the Enhanced Achievement Motivation Period. We can see the detailed Likert Score Analysis in language task performance before and after Achievement Motivation for all the learners in Non-ADHD Group here:

Learner 1

Performance on all the three language tasks for learner 1 analysed on Likert Score calculation. Here, the Likert score percent improved from 70% to 80% after achievement motivation. There is no significant difference in all the three language tasks of learner 1 even after the Enhanced Achievement Motivation Period.

Likert Score Calculation (Out of 5 scales)		
Scores	Before AM	After AM
Likert Score = Sum/30(No. of Questions)	3.5	4
% of Likert Score = LS/5	70	80

Table 3.10 Learner 1: Likert Score Calculation on Language Task Performance

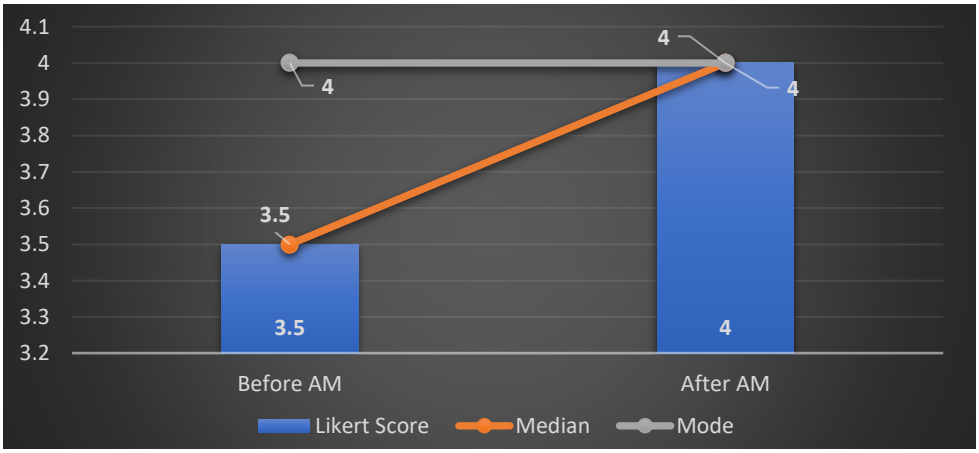

Figure 3.17 Language Task Performance Score Non-ADHD Learner 1 – 'before' and 'after' the Enhanced A M Period

Learner 2

Performance on all the three language tasks for learner 2 analysed on Likert Score calculation. Here, the Likert score percent improved from 68.6% to 84% after achievement motivation.

Likert Score Calculation (Out of 5)		
Scores	Before AM	After AM
Likert Score = Sum/30	3.43	4.2
% of Likert Score = LS/5	68.6	84

Table 3.11 Learner 2: Likert Score Calculation on Language Task Performance

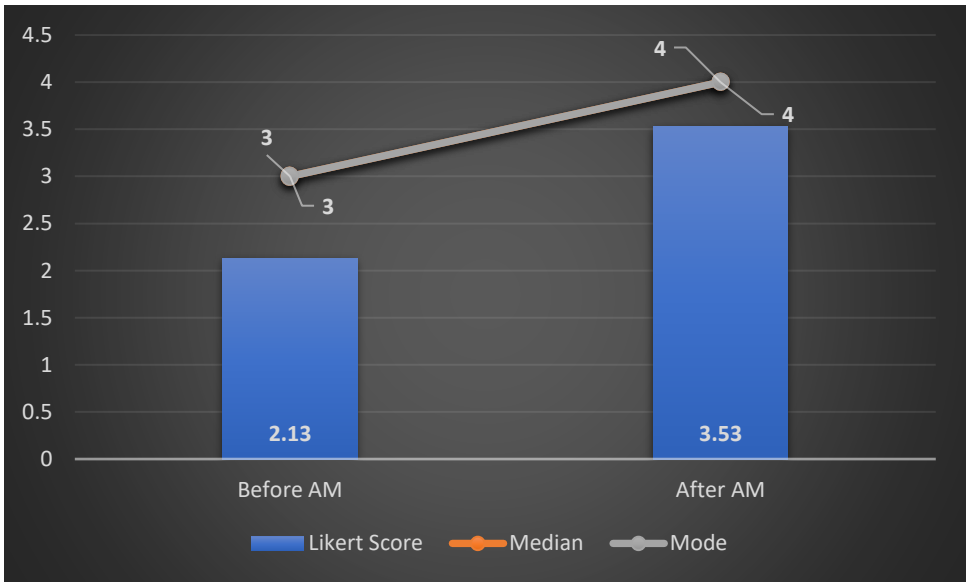

Figure 3.18 Language Task Performance Score Non-ADHD Learner 2 – 'before' and 'after' the Enhanced A M Period

Learner 3

Performance on all the three language tasks for learner 3 analysed on Likert Score calculation. Here, the Likert score percent improved from 64% to 82% after achievement motivation.

Likert Score Calculation (Out of 5)		
Scores	Before AM	After AM
Likert Score = Sum/30	3.2	4.1
% of Likert Score = LS/5	64	82

Table 3.12 Learner 3: Likert Score Calculation on Language Task Performance

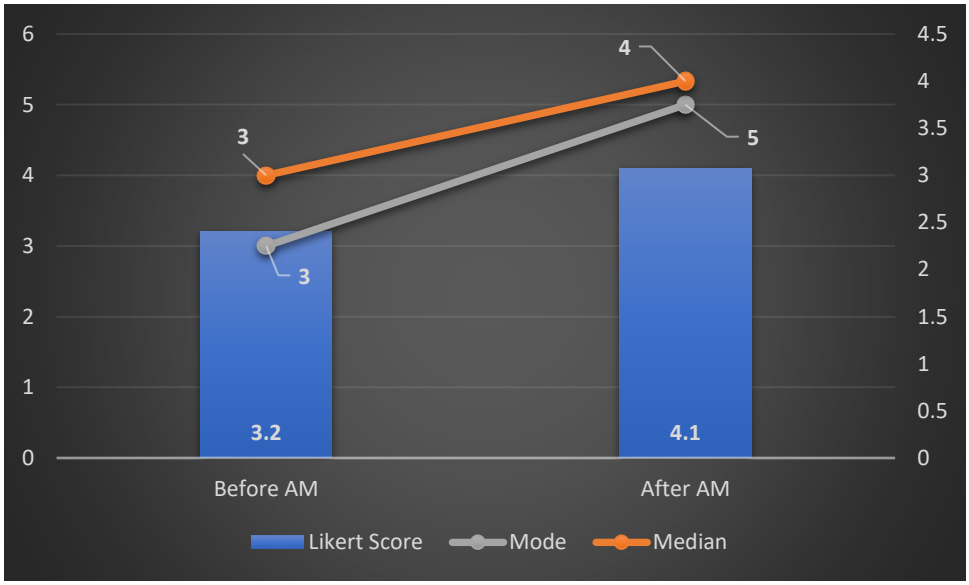

Figure 3.19 Language Task Performance Score Non-ADHD Learner 3 – 'before' and 'after' the Enhanced A M Period

Learner 4

Performance on all the three language tasks for learner 4 analysed on Likert Score calculation. Here, the Likert score percent improved from 65.4% to 77.4% after achievement motivation.

Likert Score Calculation (Out of 5)		
Scores	Before AM	After AM
Likert Score = Sum/30	3.27	3.87
% of Likert Score = LS/5	65.4	77.4

Table 3.13 Learner 4: Likert Score Calculation on Language Task Performance

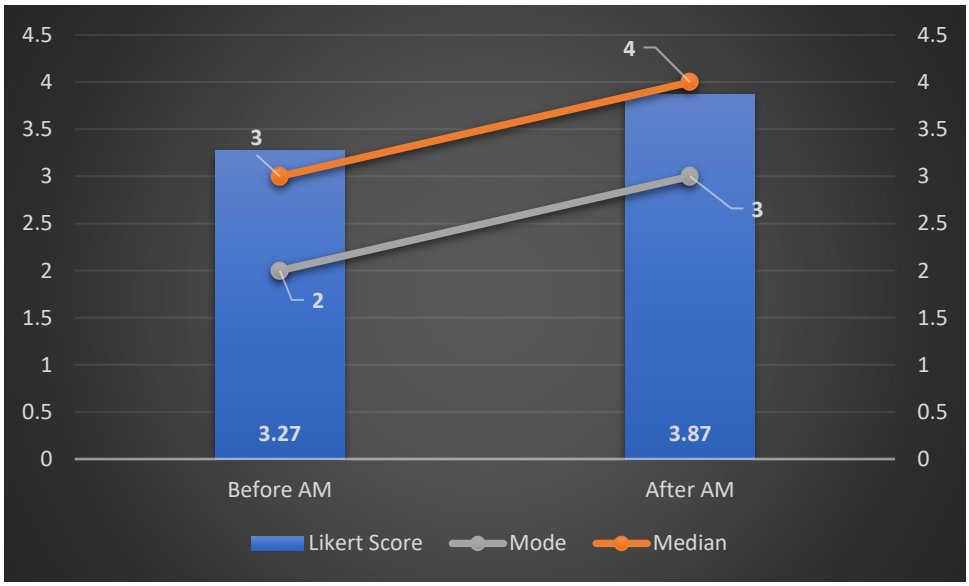

Figure 3.20 Language Task Performance Score Non-ADHD Learner 4– 'before' and 'after' the Enhanced A M Period

Learner 5

Performance on all the three language tasks for learner 5 analysed on Likert Score calculation. Here, the Likert score percent improved from 66% to 82.6% after achievement motivation.

Likert Score Calculation (Out of 5)		
Scores	Before AM	After AM
Likert Score = Sum/30	3.3	4.13
% of Likert Score = LS/5	66	82.6

Table 3.14 Learner 5: Likert Score Calculation on Language Task Performance

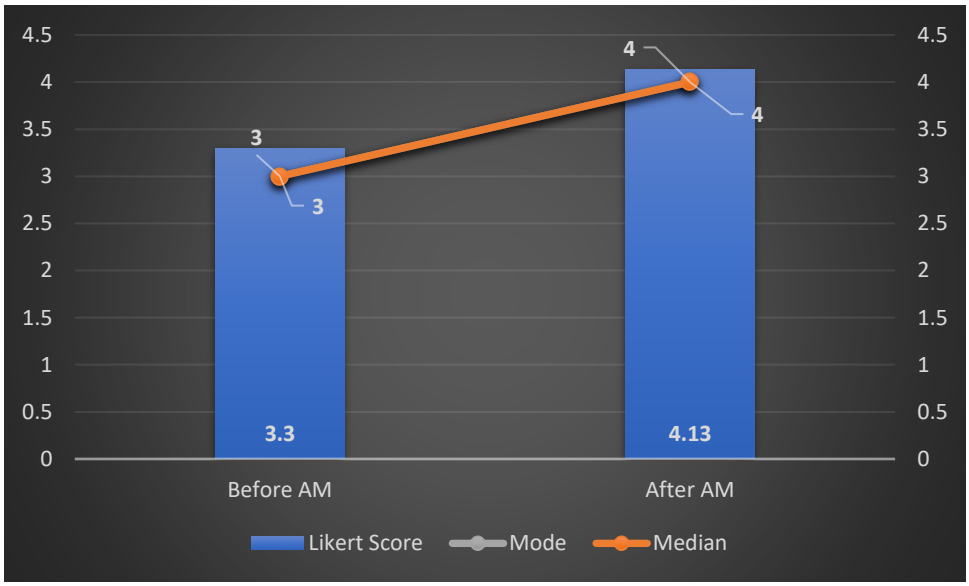

Figure 3.21 Language Task Performance Score Non-ADHD Learner 5 – 'before' and 'after' the Enhanced A M Period

Here is the mean Likert Score analysis on Language Task Performance of all the non-ADHD learners. The Language Task Performance improved from 61.86% to 77.14% from

before the Enhanced Achievement Motivation Period to after the Enhanced Achievement Motivation Period.

Performance	Likert Score	Likert%	Median	Mode
Before	4.33	61.86%	4	4
After	5.4	77.14%	5	5

Table 3.15 Likert Score Calculation summary on Language Task Performance of non-ADHD learners

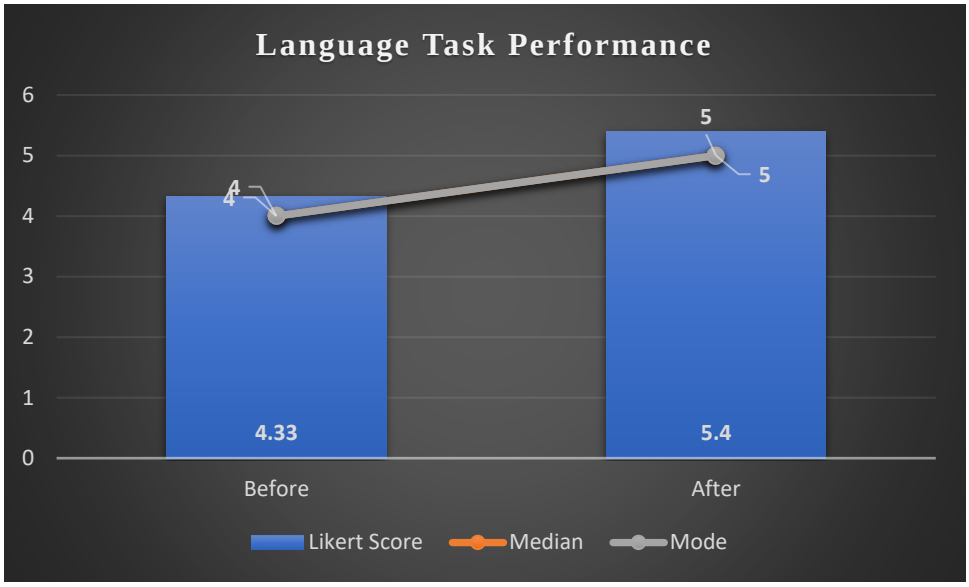

Figure 3.22 Language Task Performance Score Summary non-ADHD Learner Group – 'before' and 'after' the Enhanced Achievement Motivation Period

3.6 Statistical Analysis

The open source version of RStudio was used to analyse the data. RStudio is an integrated development environment (IDE) for R. RStudio uses the statistical tool R in the backend to do the analysis. RStudio is more user-friendly and helps in managing different projects and models simultaneously. The deployment of RStudio used the 64bit version of R, version 3.5.1. All the packages that were used within R were installed through the cloud library of R-Cran. For plotting the graphs from within R, Rcmdr package version 2.5-1 was used.

To start with, the scores of CAMS and Performance Questionnaires of both the Non-ADHD group and the ADHD group were calculated on a Likert scale and the before and after scores were compared. The Likert scales were then analysed, and the means and modes of the scales were tabulated and graphed along with the Likert scales.

For the analysis of significance between the achievement motivation, performance and the participant types (the Non-ADHD group and the ADHD group), a multivariate model analysis (m-ANOVA) was conducted. Multivariate analysis was considered as the study looked at the differences between two or more groups on a set of more than one variable.

3.7 Difference between ADHD Learners and Non-ADHD Learners according to the Achievement Motivation Scores

The first set of MANOVA modelling looked at the significance of the achievement motivation scores against the participant's types. There were two types of participants who were considered for the experiment: the ADHD group and the Non-ADHD group as the baseline. There were two sets of achievement scores (before and after) that were pitted against the participant types. In the MANOVA analysis, the before and after scores of Enhanced Achievement Motivation Period were taken as the independent variables and the participant

types were considered as the dependent variables. As the dependent variables were two and were continuous, a regular MANOVA was preferred over other types of analysis.

MANOVA Analysis:

```
> summary.aov(achmotiv.man)
 Response AM_Score.Before :
              Df Sum Sq Mean Sq F value    Pr(>F)
Subject_Type   1 115.32 115.320  134.68 < 2.2e-16 ***
Residuals    298 255.16   0.856
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

 Response AM_Score.After :
              Df  Sum Sq Mean Sq F value         Pr(>F)
Subject_Type   1  31.363 31.3633  38.488 0.000000001838 ***
Residuals    298 242.833  0.8149
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Table 3.16 MANOVA Analysis of Achievement Motivation Scores for the subject types– 'before' and 'after'

As cited above, the analysis shows a significant difference (at p-value less than 0.05) in the achievement motivation scores of the Non-ADHD group as opposed to the ADHD group. The difference in significance is marked in both before and after instances of the Achievement Motivation scorings.

This shows that the effect of achievement motivation is very different across participant types. To highlight the difference further, the graphs of the means of the before and after scores of achievement motivation were plotted between the two participant groups (ADHD and non-ADHD).

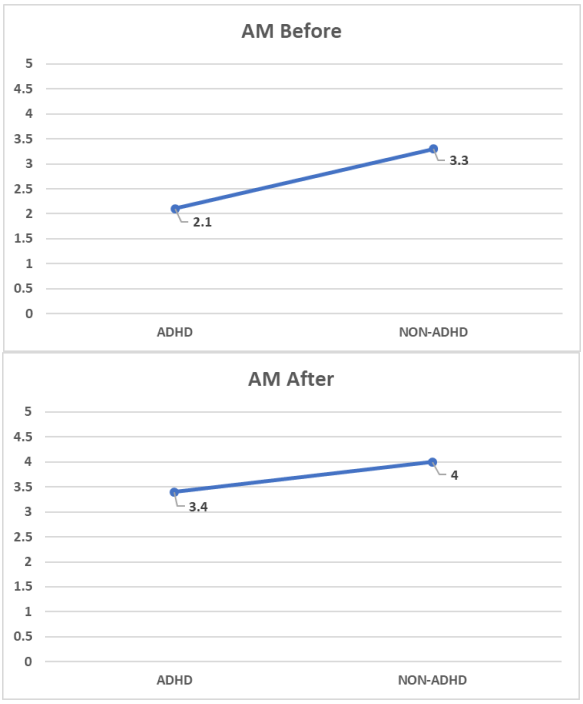

Figure 3.23 Means of Achievement Motivation Scores for the subject types– 'before' and 'after' the Enhanced Achievement Motivation Period

Here, while the average AM score mostly stayed constant, i.e., from 3.3 to 4 for the Non-ADHD group; the score moved from 2.1 to 3.4 for the ADHD group. This clearly shows the impact of achievement motivation in the way the ADHD learners responded before and after.

3.8 Difference between ADHD Learners and Non-ADHD Learners according to Language Task Performance Scores

The second set of MANOVA modelling looked at the significance of the performance scores against the participant's types. This study compared and contrasted the performance of non-ADHD and ADHD learners in different language tasks. There were two sets of performance scores (before and after) that were pitted against the participant types. In the MANOVA analysis`, the before and after performance scores were considered as the dependent variables and the participant types were taken to be the independent variable. As the dependent

variables were two and were continuous, a regular MANOVA was preferred over other types of analysis.

MANOVA Analysis:

```
> summary.aov(Perf.man)
 Response Perf_Score.Before :
              Df Sum Sq Mean Sq F value    Pr(>F)
Subject_Type   1 374.08  374.08  319.57 < 2.2e-16 ***
Residuals    298 348.83    1.17
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

 Response Perf_Score.After :
              Df Sum Sq Mean Sq F value       Pr(>F)
Subject_Type   1  48.80  48.803  27.327 0.0000003238 ***
Residuals    298 532.19   1.786
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Table 3.17 MANOVA Analysis of Language Task Performance Scores for the subject types– 'before' and 'after'

The analysis shows a significant difference in the way the two groups performed in the two different sets of tasks. The p-value in both cases (before and after) can be seen to be significantly different between the ADHD group and the Non-ADHD group. This clearly shows that there is a marked way the ADHD learners performed both before and after they went through the Enhanced Achievement Motivation Period. The plot of means between the two groups for both before and after tasks stand trial for this as below:

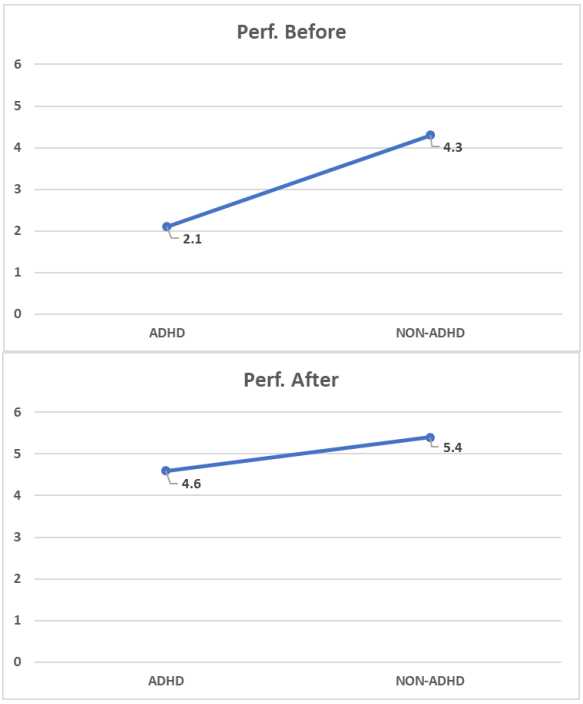

Figure 3.24 Plot of means - Language Task Performance Score for subject types – 'before' and 'after' the Enhanced Achievement Motivation Period

While the scores of ADHD learners improved by 2.5; the scores for the Non-ADHD group increased only by 1.1. This clearly shows the impact of achievement motivation on the ADHD group in performing language tasks. The analysis shows a very positive impact of achievement motivation in learners with ADHD while learning and performing language tasks.

3.9 Relationship between Achievement Motivation and Language Task Performance

The research questions were the base for the findings in this chapter. The research explored differences among ADHD and non-ADHD group in their levels of Achievement Motivation (AM) and Language Task Performance (LTP). There was a statistically significant difference in the achievement motivation levels between ADHD and non-ADHD learners. It was found that the ADHD group scored slightly higher than the non-ADHD group. However, there was limited practical implication. There was a statistically significant difference between

ADHD and non-ADHD in terms of language task performance. ADHD learners performed better in language tasks after Achievement Motivation by a large margin.

These results inspired the researcher to find out whether a correlation exists between Achievement Motivation and Language Task Performances of learners. For this, Pearson Product Moment Correlation (PPMC) was used. PPMC shows the linear relationship between two sets of data. The correlation coefficient is comprised between -1 and 1:

- "-1 indicates a strong negative correlation: this means that every time x increases, y decreases
- 0 means that there is no association between the two variables (x and y)
- 1 indicates a strong positive correlation: this means that y increases with x

The values between -1 and 1 can be further elaborated for a detailed understanding of the results:

- Exactly –1: A perfect downhill (negative) linear relationship
- –0.70: A strong downhill (negative) linear relationship
- –0.50: A moderate downhill (negative) relationship
- –0.30: A weak downhill (negative) linear relationship
- 0: No linear relationship
- +0.30: A weak uphill (positive) linear relationship
- +0.50: A moderate uphill (positive) relationship
- +0.70: A strong uphill (positive) linear relationship
- Exactly +1: A perfect uphill (positive) linear relationship"

The open source version of RStudio was used to analyse the correlation between Achievement Motivation and Language Task Performance. A Pearson Correlation Coefficient value r = 0.4077594 was obtained.

```
> pearson_corr=cor.test(Cmplt_Data$AM_Score,Cmplt_Data$Perf_Score, method="pearson")
> pearson_corr

        Pearson's product-moment correlation

data:  Cmplt_Data$AM_Score and Cmplt_Data$Perf_Score
t = 10.92, df = 598, p-value < 2.2e-16
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 0.3387722 0.4723857
sample estimates:
      cor
0.4077594
```

Thus, there is a moderate uphill (positive) relationship between AM and LTP. There is an improvement in the way the learners perform in their language tasks when there is an improvement in the Enhanced Achievement Motivation Period initiated by the teachers.

4 DISCUSSION AND CONCLUSION

4.1 Achievement Motivation and Language Task Performance in ADHD and Non-ADHD Learners

The objective of this study was to examine the role of achievement motivation in Language Task Performance amongst ADHD and Non-ADHD learners. The study analysed Achievement Motivation levels of learners and its effect on their Language Task Performance, before and after an Enhanced Achievement Motivation Period, in an Indian school setting.

The results of the study indicate a strong association between Achievement Motivation and Language Task Performance of learners. After the implementation of Enhanced Achievement Motivation Period, a statistically significant difference was found in the CAMS analysis for both ADHD and non-ADHD learners in their levels of achievement motivation. There was an improvement from 30% to 48.71% in ADHD learners whereas the improvement in non-ADHD learners was only from 48.7% to 58% in their achievement motivation levels. The results of the study show that the level of achievement motivation improved significantly in ADHD learner as compared to non-ADHD learner group from before the Enhanced Achievement Motivation Period to after. Next, the study looked at Language Task Performance of the two learner groups using Performance Measuring Questionnaire. The Language Task Performance, before and after the Enhanced Achievement Motivation Period amongst the two learner groups, was analysed using Likert Score calculation. The scores for the ADHD learner group improved from 30% to 65.57% whereas that of the non-ADHD learner group improved from 61.86% to 77.14%. This improvement is reflected in the Observer's Diary too. The qualitative analysis of the Observer's Diary, maintained by the researcher throughout the course of the study, show a great improvement in the achievement motives of the ADHD learners from the pre-test to the post-test. Thus, with the implementation of the Enhanced

Achievement Motivation Period, the Language Task Performance improved amongst both the learner groups with the ADHD learners attaining higher scores than the non-ADHD learners in their performance.

The first research question is on understanding the effect of Achievement Motivation on Language Task Performance of ADHD learner group. The instrument which was used to measure achievement motivation was CAMS. Performance measuring questionnaire was used to analyse the performance on language tasks. Using Likert Score analysis and multivariate analysis of variance (MANOVA), data were analysed to calculate the differences between the achievement motivation levels and language task performance, before and after Enhanced Achievement Motivation Period in ADHD group. Statistically significant differences were noticed in the Achievement Motivation Levels and Language Task Performance before and after the Enhanced Achievement Motivation Period. The improvement for Achievement Motivation in Likert percentage is from 30% to 48.71%. In MANOVA, the score improved from 2.1 to 3.4. The improvement for Language Task Performance in Likert percentage is from 30% to 65.57%. In MANOVA, the score improved from 2.1 to 4.6. Therefore, there is a tremendous improvement in the Language Task Performance of ADHD learners after Enhanced Achievement Motivation Period.

The concept of achievement motivation has not yet been completely explored in the case of the ADHD group of learners in a classroom. But the above result indicates that with adequate positive feedback from the teacher on Language Task Performance, ADHD learners strive to complete assigned tasks. They also work on improving their performance towards the end of the Enhanced Achievement Motivation Period. Even a few verbal and nonverbal cues in the form of positive feedback from the teacher seem to make a major difference as noticed by the improved scores in language performance tasks. Recent theories on multi-process models of ADHD, underline “fortification of learning and motivational processes” (Castellanos

& Tannock, 2002; Konrad, Gauggel, Manz, and Schöll, 2000; Nigg, 2010; Sonuga-Barke, 2002). Neuropsychological studies (Mizuno et al., 2008) highlight that the level of achievement motivation may be exclusively crucial in performance of ADHD with deviant low cognitive self-regulation and behavioural inhibition compared to a non-ADHD group of learners (Dickstein, Bannon, Castellanos, & Milham, 2006; Nigg & Casey, 2005).

The second research question on understanding the effect of Achievement Motivation on Language Task Performance of Non-ADHD learner group. The non-ADHD group was taken as the baseline in this research to understand the Language Performance of ADHD learners better. The same performance measurement questionnaire and CAMS was used to test Language Task Performance and Achievement Motivation respectively. Using Likert Score analysis and multivariate analysis of variance (MANOVA), data were analysed to see the difference between Language Task Performance before and after Enhanced Achievement Motivation Period in non-ADHD learners. The improvement for Achievement Motivation in Likert percentage is from 48.7% to 58%. In MANOVA, the score improved from 3.3 to 4. The improvement for Language Task Performance in Likert percentage is from 61.86% to 77.14%. In MANOVA, the score improved from and 4.3 to 5.4. A statistically significant difference was detected though with a moderate effect as compared to the ADHD learner group.

The above results indicate that the Enhanced Achievement Motivation Period can help learners, in general, to perform better in language tasks. The learners strive towards achieving better results with an improvement in their achievement motivation levels. In comparison with the ADHD group of learners, however, the improvement in language task performance is not that significant. Yet, we can surely see some improvement after enhanced achievement motivation period in this non-ADHD group. A considerable amount of studies also emphasises on the importance of achievement motivation in school performance and its integration for better academic results (e.g., Harlaar, & Plomin, 2006; Steinmayr & Spinath, 2009).

A third research question is on understanding the correlation between Achievement Motivation and Langauge Task Performance across the learner groups in this study. This model was tested using a Pearson Product Moment Correlation (PPMC). A statistically significant relationship, with a positive inclination, was identified between achievement motivation and language task performance. A Pearson Correlation Coefficient value r = 0.4077594 was obtained. This means that there is a moderate uphill (Positive) correlation between Achievement Motivation and Language Task Performance. This result is specific to the learner groups selected for the study.

The results suggest that the higher the achievement motivation, the greater the improvement in language task performance. Especially the learners diagnosed with ADHD need to be boosted up for their desire for success and thereby reduce their fear of failure. The ADHD learners during Enhanced Achievement Motivation Period gained confidence to overcome difficulties to achieve the objective of the task with the teacher's positive feedback. E.g., With constant positive feedback from teachers, ADHD learners reacted productively to avoid failure). Also, the findings of the study show that highly motivated ADHD learners performed on par with the non-ADHD group of learners on language tasks and the score of improvement was statistically significant across learners in the ADHD group. This stronger association between achievement motivation and performance on language tasks appears to be specifically related to ADHD symptomatology as the degree of improvement in performance score was higher in all the ADHD learners after the Enhanced Achievement Motivation Period. These findings reflect the different way Achievement Motivation seems to function across the two learner groups. Other studies also depict that the learners in the typical learning environment and "ADHD may react differently to social cues (e.g., testing situation, examiner) and to reinforcement in general" (O'Brien & Frick,1996; Waschbusch, Carrey, Willoughby, King, & Andrade, 2007). Theories in this field also show that Achievement Motivation is

dependent on (learning) experiences (Covington, 2000; McClelland et al., 1953). Thus, learner specific learning activities and implementation may improve their motivation levels and seem to yield better results in tasks. In this study, specifically in the case of ADHD-hyperactive group of learners, Enhanced Achievement Motivation Period or the positive feedback helped the learners to try until they completed the task. Their previous failures and low achievement associated with their ADHD symptoms often led them to give up on the tasks. But, the positive feedback from teachers helped them to stay focused on the task. They were constantly asking questions by the end of Enhanced Achievement Motivation Period and remained close to the teacher till the task completion. The results of this study appear to hint that extrinsic motivational cues used by the teacher kind of improve the intrinsic motivational levels of the ADHD learners. The material, verbal and non-verbal motivational cues helped them to shape their behaviour towards achieving their tasks. Distractibility was minimised to a noticeable extent by the end of the Enhanced Achievement Motivation Period as noted by the researcher.

As we had already discussed in the first chapter, the previous investigations on this topic also show that "highly motivated ADHD learners were able to perform as good as normally developing learners on receptive language and mathematical thinking" (Gut et al., 2011). According to previous studies, "improvement in performance on tasks measuring response inhibition under optimal achievement motivational levels (e.g., by implementing high incentive) was more striking in learners with ADHD than in non-ADHD group" (Carlson & Tamm, 2000; Konrad et al., 2000, J. Gut et al.,2012). For example, immediate positive feedback upgraded performance on a stop signal task in an ADHD group, however it did not show any difference in performance in a control group of typically developing learners (Carlson & Tamm, 2000; McInerney & Kerns, 2003), or led to a smaller improvement (Konrad et al., 2000). The current study is inspired by an earlier study done by J. Gut et al. in Learning and Individual Differences (2012). Though this study focusses specifically on the language tasks

performance in an Indian context, J.Gut et al.'s study found that achievement motivation leads to a stronger increase in performance for learners with ADHD than for learners without ADHD (NC), controlling for age, gender, and general fluid intelligence. The findings of the present study support the findings of the above-mentioned research studies. In general, the research studies on ADHD learners and Achievement Motivation have covered only some of the aspects so far, and further exploration can help in understanding these aspects in detail. Also, only a few motives of Achievement Motivation, 'fear of failure' and 'probability of success' have been examined through research studies (Mallett, 2004; Podlog, 2002).

4.2 Pedagogical Implications

These findings imply the relationship between achievement motivation and language learning across all learner groups especially young ADHD learners. Teachers should be specially trained to use techniques that can motivate learners for better performance on language tasks. Positive feedback on language learning will improve the performance of all learners in the classroom. In the case of ADHD learners, this can be achieved by having trained counsellors in school who are trained in teaching differential learners. The results emphasize the importance of achievement motivation as a key factor in the performance of learners with ADHD as compared to typically developing learners. Therefore, the outcomes of this study might provide a useful approach to improve performance deficits in learners with ADHD on language tasks in a school setting. Improvement in awareness among parents, teachers, peers and school counsellors/psychologists for this differential association between achievement motivation and performance could be of explicit importance. This is essential for achievement and academic confidence in learners with ADHD by creating an inclusive and fruitful learning experience and reducing their fear of failure/ odds of succeeding. The study supports an

integrative approach of all learner groups in a classroom and is a step towards future evaluation and intervention programs for ADHD learners in India.

4.3 Limitations and Future Research

Here are the limitations of the current study. First, due to the constraints discussed in the methodology chapter, the sample size is very small. Since, it is a very specific learner group of ADHD learners, the researcher had to limit the sample size. Therefore, the results of the study cannot be generalised to larger populations. However, the results support previous research done in this field of study.

The learner's achievement motivation was rated by the teacher and not assessed from the learner's perspective. The teacher was asked to rate the questionnaire due to the age-restriction and the diagnosed condition of the learners. Thus, future research on a similar field can incorporate learners belonging to higher age-range who can evaluate and rate their performance with the help of the questionnaire.

Next, the results of the study cannot be generalised to all subtypes of ADHD. The ADHD group in the present study included only learners belonging to 'Hyperactive' subtype of the predominantly large domain of ADHD. This subtype was clinically diagnosed by a certified physician and tested on their ADHD levels. Thus, the selection of ADHD learners was restricted to those who were diagnosed using a uniform assessment tool (Vanderbilt's tool). As learners diagnosed using multiple tools for determining ADHD may show different symptoms. For this particular subtype of ADHD learners, there was a statistically positive effect of Achievement Motivation on Language Task Performance. Thus, further research with larger sample size and inclusion of varied subtypes of ADHD will give us a better and detailed understanding of the effect of Achievement Motivation on Language Task Performance. The

age group of the learners too play a significant role in determining results. Thus, higher and varied age-group of learners might give us an alternate result.

The specific nature of the association between achievement motivation and performance on school aptitudes in different types of disruptive disorders other than ADHD should be clarified in future studies by investigating separate groups of learners with different language tasks.

Though the specificity of the conclusions regarding the associations between Achievement Motivation and language tasks performance in learners with ADHD was improved through the inclusion of non-ADHD, no experimental manipulation of motivational states was conducted. Consequently, alternative variables significant to the findings should be considered. For example, “children with ADHD may be predominantly discouraged by experiences of failure” (Luman et al., 2005; Oliver & Steenkamp, 2004). “This may lead to heightened stress intensity and anxiety in achievement situations in learners with ADHD as compared to a non-ADHD group, which in turn may impair learning and performance on complex tasks” (Yerkes & Dodson, 1908). Additionally, child-rearing differences may be essential especially in clinical groups since studies have shown that “parents of children with ADHD report higher levels of stress, less adaptive coping, and lower parenting self-efficacy as compared to parents of children without ADHD” (Sciberras, Dip, Roose, & Elfron, 2009).

The Language Tasks in this study are developed for primary learners and comprises of simple learning activities based on parts of speech. Other modalities of language learning should be incorporated in future studies to further understand the relationship between Achievement Motivation and language learning.

4.4 Conclusion

Overall, this study concludes that Achievement Motivation in the form of 'Enhanced Achievement Motivation Period' can help young learners, in general, to perform better in language tasks. The effect of Achievement Motivation on Language Tasks Performance was higher in ADHD learners as compared to the non-ADHD learners. There is a positive correlation between Achievement Motivation and Language Task Performance amongst learners. This study is a favourable approach towards improving the language performance of learners who are differently abled. With the right intervention by teachers and counsellors in school, achievement motivation can be integrated into language learning across all learners in a classroom. The results of this study will help in developing future evaluation and intervention programs in schools aimed at reducing learning difficulties faced by young ADHD learners.

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Appendix-1

a

CAMS Questionnaire for ADHD Learners – 'Before' and 'After 'AM

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever			x			3
		Productive		x				2
		Ambitious			x			3
		Competent	x					1
		Energetic				x		4
		Aggressive		x				2
		Thorough		x				2
		Efficient		x				2
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.			x			3
		I enjoy competitive recreational activities.	x					1
		Our family actively plays and works together.			x			3
		I am active even during leisure time.		x				2
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.	x					1
		I have a strong desire to be a success in the things I set out to do.		x				2
		I can keep my mind on a task for a long period of time.		x				2
		In most projects, I would rather take personal responsibility for completion than be only a contributor.	x					1
		I like to undertake projects that involve some risk.	x					1
		I have a tendency not to give up easily when confronted with a difficult problem.		x				2
		While working on a task, I think of how it will feel when and if the task is successfully completed.		x				2

		I finish things that I start.		x				2
		When engaged in leisure time activities, I try to strive for excellence.		x				2
		I prefer things to be challenging (involving some risk of failure).	x					1
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.		x				2
		I feel that my present work is meaningful.				x		4
		I thoroughly explore the environment before making decisions.		x				2
		I like to know how I am performing when working on a task.			x			3
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.		x				2
		I plan my activities in advance.		x				2
Count of Scores			6	15	7	2	0	-

AM(CAMS)Questionnaire-After

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever				x		4
		Productive			x			3
		Ambitious			x			3
		Competent			x			3
		Energetic				x		4
		Aggressive		x				2
		Thorough		x				2
		Efficient			x			3
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.			x			3
		I enjoy competitive recreational activities.				x		4
		Our family actively plays and works together.			x			3
		I am active even during leisure time.				x		4
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.	x					1
		I have a strong desire to be a success in the things I set out to do.				x		4
		I can keep my mind on a task for a long period of time.			x			3
		In most projects, I would rather take personal responsibility for completion than be only a contributor.		x				2
		I like to undertake projects that involve some risk.	x					1
		I have a tendency not to give up easily when confronted with a difficult problem.			x			3
		While working on a task, I think of how it will feel when and if the task is successfully completed.		x				2
		I finish things that I start.					x	5

		When engaged in leisure time activities, I try to strive for excellence.				x		4
		I prefer things to be challenging (involving some risk of failure).		x				2
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.		x				2
		I feel that my present work is meaningful.					x	5
		I thoroughly explore the environment before making decisions.			x			3
		I like to know how I am performing when working on a task.				x		4
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.			x			3
		I plan my activities in advance.		x				2
Count of Scores			2	7	12	7	2	-

b

AM(CAMS)Questionnaire-Before

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever		x				2
		Productive		x				2
		Ambitious	x					1
		Competent			x			3
		Energetic				x		4
		Aggressive	x					1
		Thorough			x			3
		Efficient		x				2
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.		x				2
		I enjoy competitive recreational activities.			x			3
		Our family actively plays and works together.			x			3
		I am active even during leisure time.		x				2
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.	x					1
		I have a strong desire to be a success in the things I set out to do.		x				2
		I can keep my mind on a task for a long period of time.	x					1
		In most projects, I would rather take personal responsibility for completion than be only a contributor.			x			3
		I like to undertake projects that involve some risk.	x					1
		I have a tendency not to give up easily when confronted with a difficult problem.		x				2
		While working on a task, I think of how it will feel when and if the task is successfully completed.			x			3
		I finish things that I start.		x				2

		When engaged in leisure time activities, I try to strive for excellence.	x					1
		I prefer things to be challenging (involving some risk of failure).	x					1
		When playing a game, I like to really know and understand the rules and regulations.		x				2
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.		x				2
		I feel that my present work is meaningful.				x		4
		I thoroughly explore the environment before making decisions.	x					1
		I like to know how I am performing when working on a task.			x			3
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.		x				2
		I plan my activities in advance.		x				2
Count of Scores			8	12	8	2	0	-

AM(CAMS)Questionnaire-After

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever			x			3
		Productive				x		4
		Ambitious			x			3
		Competent					x	5
		Energetic				x		4
		Aggressive		x				2
		Thorough		x				2
		Efficient				x		4
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.			x			3
		I enjoy competitive recreational activities.					x	5
		Our family actively plays and works together.			x			3
		I am active even during leisure time.				x		4
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.					x	5
		I have a strong desire to be a success in the things I set out to do.			x			3
		I can keep my mind on a task for a long period of time.				x		4
		In most projects, I would rather take personal responsibility for completion than be only a contributor.		x				2
		I like to undertake projects that involve some risk.					x	5
		I have a tendency not to give up easily when confronted with a difficult problem.		x				2
		While working on a task, I think of how it will feel when and if the task is successfully completed.			x			3
		I finish things that I start.					x	5

		When engaged in leisure time activities, I try to strive for excellence.				x		4
		I prefer things to be challenging (involving some risk of failure).		x				2
		When playing a game, I like to really know and understand the rules and regulations.				x		4
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.			x			3
		I feel that my present work is meaningful.					x	5
		I thoroughly explore the environment before making decisions.			x			3
		I like to know how I am performing when working on a task.				x		4
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.			x			3
		I plan my activities in advance.				x		4
Count of Scores			0	5	10	9	6	-

c

AM(CAMS)Questionnaire-Before

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever		x				2
		Productive		x				2
		Ambitious	x					1
		Competent	x					1
		Energetic			x			3
		Aggressive		x				2
		Thorough				x		4
		Efficient		x				2
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.		x				2
		I enjoy competitive recreational activities.			x			3
		Our family actively plays and works together.			x			3
		I am active even during leisure time.	x					1
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.				x		4
		I have a strong desire to be a success in the things I set out to do.	x					1
		I can keep my mind on a task for a long period of time.	x					1
		In most projects, I would rather take personal responsibility for completion than be only a contributor.			x			3
		I like to undertake projects that involve some risk.	x					1
		I have a tendency not to give up easily when confronted with a difficult problem.			x			3
		While working on a task, I think of how it will feel when and if the task is successfully completed.		x				2
		I finish things that I start.		x				2

		When engaged in leisure time activities, I try to strive for excellence.	x					1
		I prefer things to be challenging (involving some risk of failure).	x					1
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.	x					1
		I feel that my present work is meaningful.		x				2
		I thoroughly explore the environment before making decisions.		x				2
		I like to know how I am performing when working on a task.				x		4
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.	x					1
		I plan my activities in advance.		x				2
Count of Scores			10	10	7	3	0	-

AM(CAMS)Questionnaire-After

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever			x			3
		Productive				x		4
		Ambitious			x			3
		Competent		x				2
		Energetic					x	5
		Aggressive				x		4
		Thorough					x	5
		Efficient			x			3
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.				x		4
		I enjoy competitive recreational activities.				x		4
		Our family actively plays and works together.			x			3
		I am active even during leisure time.		x				2
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.					x	5
		I have a strong desire to be a success in the things I set out to do.			x			3
		I can keep my mind on a task for a long period of time.		x				2
		In most projects, I would rather take personal responsibility for completion than be only a contributor.				x		4
		I like to undertake projects that involve some risk.			x			3
		I have a tendency not to give up easily when confronted with a difficult problem.			x			3
		While working on a task, I think of how it will feel when and if the task is successfully completed.				x		4
		I finish things that I start.				x		4

		When engaged in leisure time activities, I try to strive for excellence.		x				2
		I prefer things to be challenging (involving some risk of failure).			x			3
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.					x	5
		I set goals for my lifetime.		x				2
		I feel that my present work is meaningful.					x	5
		I thoroughly explore the environment before making decisions.			x			3
		I like to know how I am performing when working on a task.					x	5
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.			x			3
		I plan my activities in advance.				x		4
Count of Scores			0	5	11	8	6	-

d

AM(CAMS)Questionnaire-Before

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever			x			3
		Productive		x				2
		Ambitious			x			3
		Competent	x					1
		Energetic				x		4
		Aggressive		x				2
		Thorough		x				2
		Efficient		x				2
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.			x			3
		I enjoy competitive recreational activities.	x					1
		Our family actively plays and works together.			x			3
		I am active even during leisure time.		x				2
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.	x					1
		I have a strong desire to be a success in the things I set out to do.		x				2
		I can keep my mind on a task for a long period of time.		x				2
		In most projects, I would rather take personal responsibility for completion than be only a contributor.	x					1
		I like to undertake projects that involve some risk.	x					1
		I have a tendency not to give up easily when confronted with a difficult problem.		x				2
		While working on a task, I think of how it will feel when and if the task is successfully completed.		x				2
		I finish things that I start.		x				2

		When engaged in leisure time activities, I try to strive for excellence.		x				2
		I prefer things to be challenging (involving some risk of failure).	x					1
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.		x				2
		I feel that my present work is meaningful.				x		4
		I thoroughly explore the environment before making decisions.		x				2
		I like to know how I am performing when working on a task.			x			3
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.		x				2
		I plan my activities in advance.		x				2
Count of Scores			6	15	7	2	0	-

AM(CAMS)Questionnaire-After

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever				x		4
		Productive			x			3
		Ambitious			x			3
		Competent			x			3
		Energetic				x		4
		Aggressive		x				2
		Thorough		x				2
		Efficient			x			3
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.			x			3
		I enjoy competitive recreational activities.				x		4
		Our family actively plays and works together.			x			3
		I am active even during leisure time.				x		4
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.		x				2
		I have a strong desire to be a success in the things I set out to do.				x		4
		I can keep my mind on a task for a long period of time.			x			3
		In most projects, I would rather take personal responsibility for completion than be only a contributor.			x			3
		I like to undertake projects that involve some risk.				x		4
		I have a tendency not to give up easily when confronted with a difficult problem.			x			3
		While working on a task, I think of how it will feel when and if the task is successfully completed.		x				2
		I finish things that I start.					x	5

		When engaged in leisure time activities, I try to strive for excellence.					x	5
		I prefer things to be challenging (involving some risk of failure).					x	5
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.			x			3
		I feel that my present work is meaningful.					x	5
		I thoroughly explore the environment before making decisions.			x			3
		I like to know how I am performing when working on a task.				x		4
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.			x			3
		I plan my activities in advance.				x		4
Count of Scores			0	4	14	8	4	-

e

AM(CAMS)Questionnaire-Before

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever		x				2
		Productive		x				2
		Ambitious		x				2
		Competent	x					1
		Energetic				x		4
		Aggressive			x			3
		Thorough	x					1
		Efficient	x					1
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.				x		4
		I enjoy competitive recreational activities.	x					1
		Our family actively plays and works together.			x			3
		I am active even during leisure time.		x				2
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.	x					1
		I have a strong desire to be a success in the things I set out to do.		x				2
		I can keep my mind on a task for a long period of time.	x					1
		In most projects, I would rather take personal responsibility for completion than be only a contributor.		x				2
		I like to undertake projects that involve some risk.			x			3
		I have a tendency not to give up easily when confronted with a difficult problem.		x				2
		While working on a task, I think of how it will feel when and if the task is successfully completed.	x					1
		I finish things that I start.		x				2

		When engaged in leisure time activities, I try to strive for excellence.	x					1
		I prefer things to be challenging (involving some risk of failure).	x					1
		When playing a game, I like to really know and understand the rules and regulations.			x			3
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.		x				2
		I feel that my present work is meaningful.	x					1
		I thoroughly explore the environment before making decisions.		x				2
		I like to know how I am performing when working on a task.	x					1
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.		x				2
		I plan my activities in advance.		x				2
Count of Scores			11	12	5	2	0	-

AM(CAMS)Questionnaire-After

Part	Description	Questions	Never	Rarely	Often	Mostly	Always	Score
Part I	Measure of Achievement Motivation in the Following Setting: In school work, the learner is (was)	An achiever				x		4
		Productive				x		4
		Ambitious			x			3
		Competent					x	5
		Energetic				x		4
		Aggressive			x			3
		Thorough		x				2
		Efficient			x			3
Part II	Measure of Achievement Motivation: Thoughts, Behaviours, Settings	Much of my spare time is well spent with my family.					x	5
		I enjoy competitive recreational activities.			x			3
		Our family actively plays and works together.					x	5
		I am active even during leisure time.				x		4
		When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.		x				2
		I have a strong desire to be a success in the things I set out to do.				x		4
		I can keep my mind on a task for a long period of time.				x		4
		In most projects, I would rather take personal responsibility for completion than be only a contributor.			x			3
		I like to undertake projects that involve some risk.			x			3
		I have a tendency not to give up easily when confronted with a difficult problem.					x	5
		While working on a task, I think of how it will feel when and if the task is successfully completed.		x				2
		I finish things that I start.					x	5

		When engaged in leisure time activities, I try to strive for excellence.				x		4
		I prefer things to be challenging (involving some risk of failure).		x				2
		When playing a game, I like to really know and understand the rules and regulations.					x	5
		When involved in a task, I sometimes think of how I may feel if I fail.			x			3
		I set goals for my lifetime.				x		4
		I feel that my present work is meaningful.			x			3
		I thoroughly explore the environment before making decisions.				x		4
		I like to know how I am performing when working on a task.			x			3
		When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.				x		4
		I plan my activities in advance.				x		4
Count of Scores			0	4	9	11	6	-

Appendix – 2

Performance Measure Questionnaire

Learner 1

Task 1: Animal / Colour Identification and Spell Them Out

Teachers ask the learners to draw animals. Learners identify and name the animals. They are then asked to spell it out. Later, the learner is asked to colour the animal with colours of their choice. The learner repeats the task of colour identification and spelling them out.

This table analyses the learners' performance before Achievement Motivation.

Below statements were assessed by the teacher based on the learner's performance on each task.

The scales are as follows: 1 – Completely Disagree 2 – Mostly Disagree

3 – Slightly Disagree 4 – Sometimes Agree/Sometimes Disagree 5 – Slightly Agree

6 – Mostly Agree 7 – Completely Agree

1) The learner was able to complete the task on time.	**1 2 3 4 5 6 7**
2) The learner raised questions when in doubt.	**1 2 3 4 5 6 7**
3) The learner learnt better when it was a group task.	**1 2 3 4 5 6 7**
4) The learner was able to explain/ give reasons for his/her answers in the task.	**1 2 3 4 5 6 7**
5) The learner sort help from the teacher/ peer	**1 2 3 4 5 6 7**
6) The learner picked the answers logically. E.g.: Naming an animal with wings as a bird or choosing the right colour for the animal.	**1 2 3 4 5 6 7**
7) The learner always moved from one element in the task to other in order.	**1 2 3 4 5 6 7**
8) The learner practised the task before	**1 2 3 4 5 6 7**

or after commencement.	
9) The learner was eager to complete the task.	1 2 3 4 5 6 7
10) It was easy for the learner to concentrate.	1 2 3 4 5 6 7

Task 2: Learning Verbs

Learners sing and move according to the teachers' instructions. The teacher uses separate song for each animal portraying their behaviour. The learners here learn different action words/ verbs by imitating the movement of the animal mentioned by the teacher.

E.g.: The caterpillar **crawls**up and down the hill.

This table analyses the learners' performance before Achievement Motivation.

Below statements were assessed by the teacher based on the learner's performance on each task.

The scales are as follows: 1 – Completely Disagree 2 – Mostly Disagree

3 – Slightly Disagree4 – Sometimes Agree/Sometimes Disagree 5 – Slightly Agree

6 – Mostly Agree 7 – Completely Agree

1) The learner was able to complete the task on time.	1 2 3 4 5 6 7
2) The learner raised questions when in doubt.	1 2 3 4 5 6 7
3) The learner learnt better when it was a group task.	1 2 3 4 5 6 7
4) The learner was able to explain/ give reasons for his/her answers in the	1 2 3 4 5 6 7

task.	
5) The learner sort help from the teacher/ peer	1 2 3 4 5 6 7
6) The learner picked the answers logically. E.g.: Naming an animal with wings as a bird or choosing the right colour for the animal.	1 2 3 4 5 6 7
7) The learner always moved from one element in the task to other in order.	1 2 3 4 5 6 7
8) The learner practised the task before or after commencement.	1 2 3 4 5 6 7
9) The learner was eager to complete the task.	1 2 3 4 5 6 7
10) It was easy for the learner to concentrate.	1 2 3 4 5 6 7

Task 3: Identification of Prepositions

Learners complete the questions raised by the teacher using the apt prepositions. The teacher frames questions from the 'animal movement' song and other rhymes.

E.g.: Up and down, **On** the floor, **across** the floor

This table analyses the learners' performance before Achievement Motivation.

Below statements were assessed by the teacher based on the learner's performance on each task.

The scales are as follows: 1 – Completely Disagree 2 – Mostly Disagree

3 – Slightly Disagree4 – Sometimes Agree/Sometimes Disagree 5 – Slightly Agree

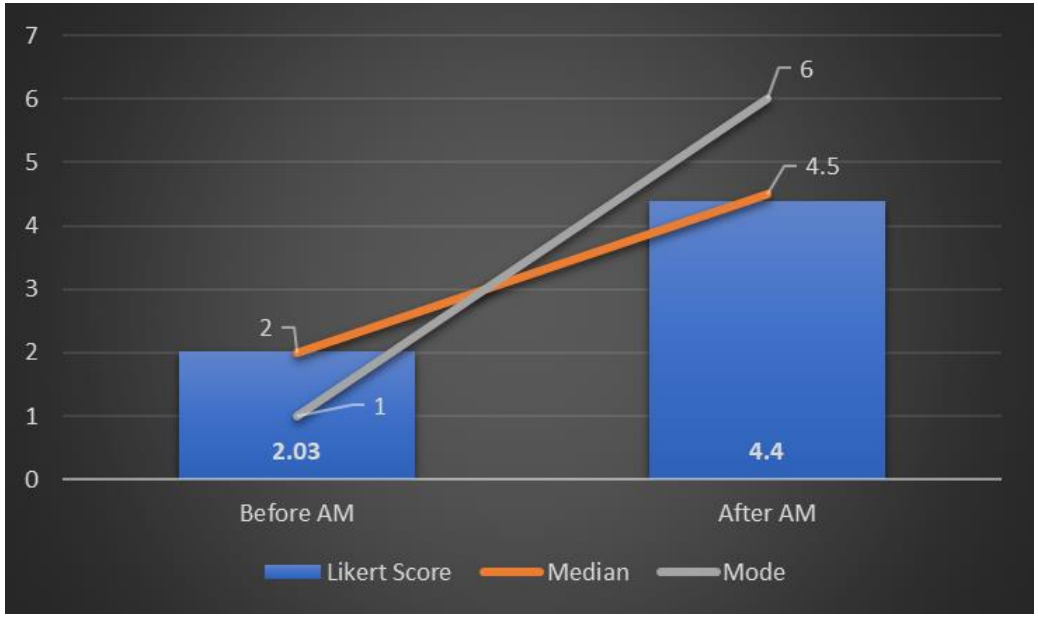
6 – Mostly Agree 7 – Completely Agree

1) The learner was able to complete the task on time.	1 2 3 4 5 6 7
2) The learner raised questions when in doubt.	1 2 3 4 5 6 7
3) The learner learnt better when it was a group task.	1 2 3 4 5 6 7
4) The learner was able to explain/ give reasons for his/her answers in the task.	1 2 3 4 5 6 7
5) The learner sort help from the teacher/ peer	1 2 3 4 5 6 7
6) The learner picked the answers logically. E.g.: Naming an animal with wings as a bird or choosing the right colour for the animal.	1 2 3 4 5 6 7
7) The learner always moved from one element in the task to other in order.	1 2 3 4 5 6 7
8) The learner practised the task before or after commencement.	1 2 3 4 5 6 7
9) The learner was eager to complete the task.	1 2 3 4 5 6 7
10) It was easy for the learner to concentrate.	1 2 3 4 5 6 7

Appendix-3

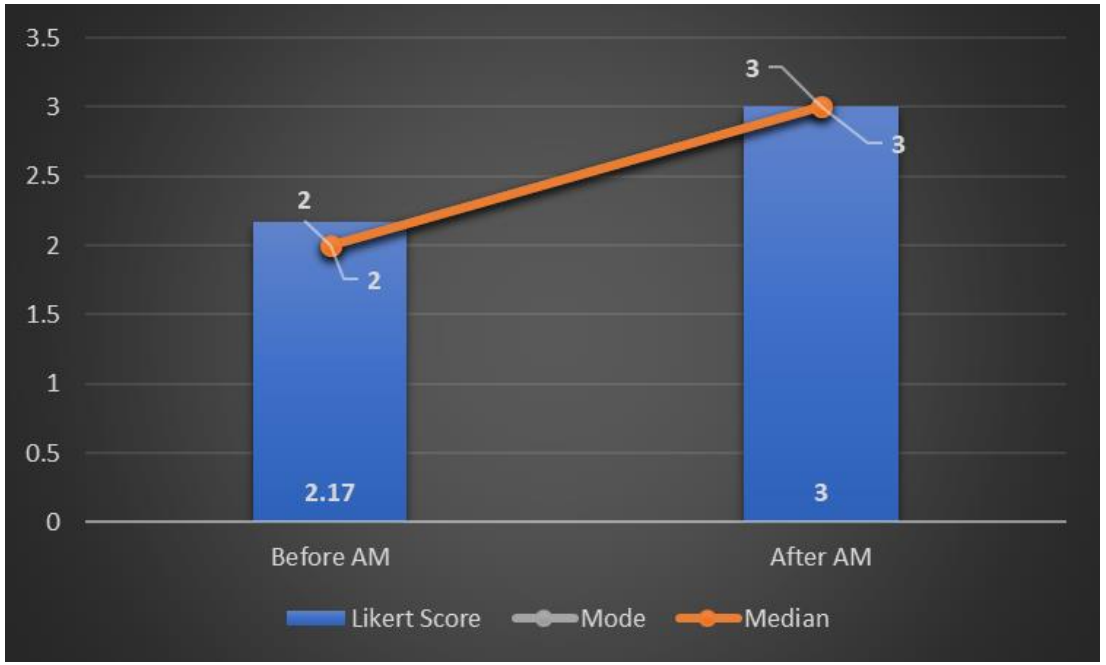
Learner-1 (ADHD): Sample Performance Scale Calculation

Likert Score Calculation (Out of 7)				
Scales	Before AM		After AM	
Always Disagree = 1	13	13	0	0
Mostly Disagree = 2	8	16	4	8
Slightly Disagree = 3	5	15	7	21
Sometimes Agree/Disagree = 4	3	12	4	16
Slightly Agree = 5	1	5	5	25
Mostly Agree = 6	0	0	8	48
Always Agree = 7	0	0	2	14
Likert Score = Sum/30	2.03		4.4	
% of Likert Score = LS/7	**29**		**62.86**	



Learner-1 (ADHD): AM (CAMS) - Scales

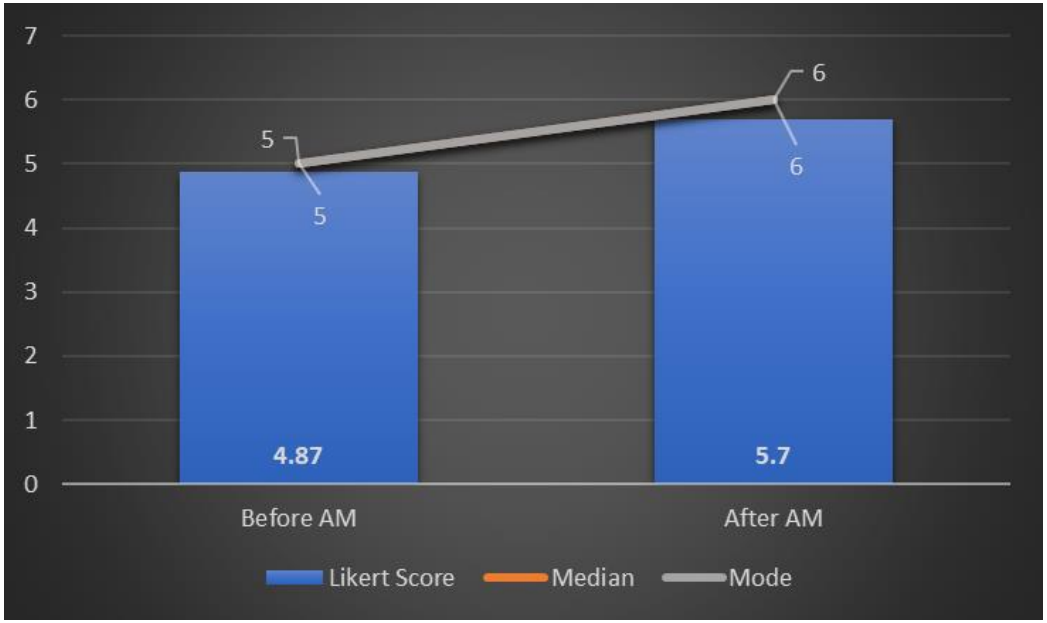
Likert Score Calculation (Out of 5)				
	Before		After	
Scales	Occurrences	Scores	Occurrences	Scores
Never =1	6	6	2	2
Rarely =2	15	30	7	14
Often = 3	7	21	12	36
Mostly = 4	2	8	7	28
Always = 5	0	0	2	10
Likert Score = Sum/30	2.17		3	
% of Likert Score = LS/5	**43.4**		**60**	



Appendix-4

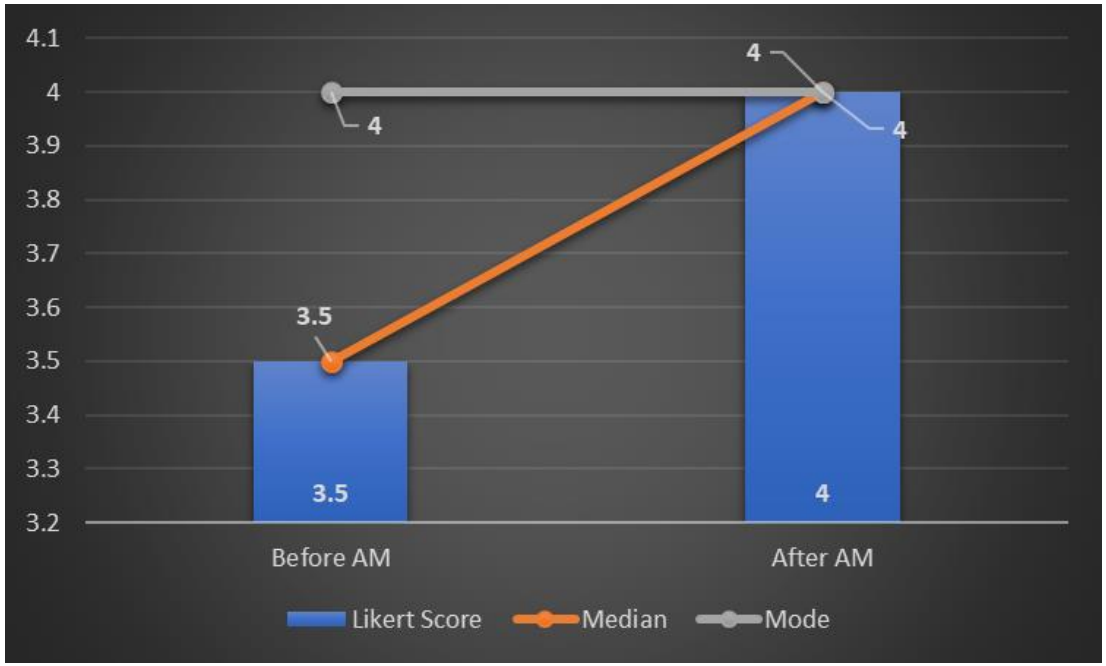
Learner-1 (Baseline): Sample Performance Scale Calculation

Likert Score Calculation (Out of 7)				
Scales	Before AM		After AM	
Always Disagree = 1	0	0	0	0
Mostly Disagree = 2	0	0	0	0
Slightly Disagree = 3	3	9	0	0
Sometimes Agree/Disagree = 4	9	36	6	24
Slightly Agree = 5	10	50	6	30
Mostly Agree = 6	5	30	9	54
Always Agree = 7	3	21	9	63
Likert Score = Sum/30	4.87		5.7	
% of Likert Score = LS/7	**69.57**		**81.43**	



Learner-1 (Baseline): AM (CAMS) - Scales

Likert Score Calculation (Out of 5)				
	Before		After	
Scales	Occurrences	Scores	Occurrences	Scores
Never =1	0	0	0	0
Rarely =2	4	8	0	0
Often = 3	11	33	9	27
Mostly = 4	11	44	12	48
Always = 5	4	20	9	45
Likert Score = Sum/30	3.5		4	
% of Likert Score = LS/5	**70**		**80**	



Institutional Ethics Committee
University of Hyderabad

Justice TNC Rangarajan
Chairperson

Prof. Geeta K. Vemuganti
Member Secretary

Decision Letter of Institute Ethics Committee

IEC No. **Application No:**	UH/IEC/2019/149	**Date of review**	23-04-2019
Project Title:	Language Learning and Achievement Motivation in Learners with ADHD		
Principal Investigator/ Co-PI:	PI: Krithika Nambiar CI: NA		
Participating Institutes if any	----	**Approval from Participating Institute**	---
Documents received and reviewed	Protocol, ICF		
In case of renewal submission of update	----		
Decision of the IEC:	Approved Duration: One year from date of approval		
Any other Comments Requirements for conditional Approval	----		
Members Present	Sri Justice Rangarajan, Dr. C.T. Anitha, Dr. Naga Lakshmi, Dr. Sunita Mishra, Dr. Suvashisa Rana, Dr. Savitri Sharma, Smt. Vimala Sthanikam		

Please note:

a. Any amendments in the protocol must be informed to the Ethics committee and fresh approval taken.
b. Any serious adverse event must be reported to the Ethics Committee within 48 hours in writing (mentioning the protocol No. or the study ID)
c. Any advertisement placed in the newspapers, magazines must be submitted for approval.
d. The results of the study should be presented in any of the academic forums of the hospital annually.
e. If the conduct of the study is to be continued beyond the approved period, an application for the same must be forwarded to the Ethics Committee.
f. It is hereby confirmed that neither you nor any of the members of the study team participated in the decision making/voting procedures.

Chairperson
(Justice Rangarajan)

Chairperson
Institutional Ethics Committee (IEC)
School of Medical Sciences
University of Hyderabad

Member Secretary/Convener

Dr. C.T. ANITHA M.D. MPH
Associate Professor
School of Medical Sciences
University of Hyderabad
Hyderabad-500 046, India.

Address : School of Medical Sciences, University of Hyderabad, C.R. Rao Road, Gachibowli, Hyderabad - 500 046
Tel (O) : +91-040-23135470 / 23013279
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Information regarding Children, Parents, Staff, Consultants or Volunteers, Ananya Learning Centre and Pravara Educational Trust shall be respected and handled confidentially. All information concerning children, parents, staff or volunteers shall be confidential and shall not be disclosed or discussed with anyone other than those authorised by law. I will refrain from sharing my views/comments about Ananya Learning Centre on Google, All Social Media Platforms, Whatsapp groups or in any other public domains. I am fully aware that failure to abide by this agreement could result in legal action.

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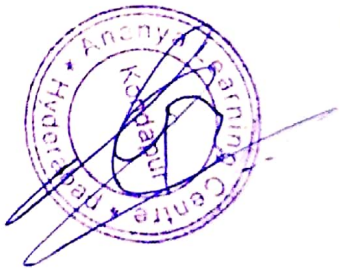

Signature: Krithika

Designation: Researcher

Date: 25.02.2018

Krithika Nambiar
17HGHL01
Centre for English Language Studies
University of Hyderabad

Mount Carmel College, Autonomous

#58, Palace Road, Bengaluru - 560052

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This is to certify that Kritika Nambiar

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Seminar Convener

Head, Department of English

Effect of Achievement Motivation on Language Task Performance of Learners with ADHD

by Krithika Nambiar

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