

# ***The Impact of Neuro-Linguistic Programming-Based Training Program on Language Skill Development in Iraqi Preparatory School Students***

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**Abstract:** Developing language skills has been a key focus of educational institutions, because it is integral to students' academic success. This, this factor guarantees more scholarly attention. This work tests how training programmes incorporating key principles of neuro-linguistic programming (NLP), such as improve communication skills, increase self-awareness, effective goal setting and attainment, enhanced learning and study strategies, and strengthened leadership and influence abilities, developing language skill among Iraqi preparatory school students. The study used a quantitative approach to evaluate the effect of the programme on a randomly chosen cohort of 357 students from a preparatory school in Baghdad, with data collected via questionnaires. It also used Smart-PLS to assess data reliability and test link among variables. The findings showed a significant positive effect of the NLP-based training, with students showing a big improvements in their language proficiency.

**Keywords:** Training Program, NLP, Improved Communication Skills, Enhanced Self-Awareness, Effective Goal Setting and Achievement, Language Skills.

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## **1. Introduction**

Neuro-Linguistic Programming (NLP) has appeared as a valuable approach to foster the improvements of students' language skills, so increasing their proficiency in listening, reading, writing, and speaking. Rooted in the intricate interplay between cognition, language, and behaviour, NLP aims to decode the patterns and linguistic structures shaping individuals' actions (El-Ashry, 2021). In addition, it develops strategies to improve communication and make meaningful behavioural transformations easy. Because of the decline in language proficiency among Iraqi high school students, this study tests the potential of NLP as an instructional tool for addressing this challenge (Purnama et al., 2023). Previous studies show the NLP role in educational contexts such as Rifki, Andria and Angela (2021) who indicated that NLP-based training programmes significantly improved students' verbal communication skills, with sustained advantages even following programme completion. So the current work tests the effectiveness

of an NLP-based training programme in the improvement of language skills among Iraqi high school students (Al-Shloul, 2023).

This study contributes to the knowledge of the effectiveness of training programmes in enhancing language skills among preparatory school students. It identifies the specific language skills posing the greatest challenges at this educational stage and evaluates the efficacy of training programmes to address these difficulties and improve language proficiency. Moreover, the study inspects the effect of individual student features on the success of such programmes in the development of language skills. This study contributes to language education research which enriches academic discourse in both local and Arabic scholarly communities. Also, it is positioned as a novel scientific contribution that advances language skill discussions in preparatory school students.

This work meticulously shows the design and systematic use of an NLP-based training programme to foster language skill development among preparatory school students. An innovative alternative to conventional language learning approaches has the potential to enhance student engagement and overall proficiency significantly. The work shows a rigorously validated questionnaire designed to effectively test language skills among the study sample. This instrument fills critical gaps in the assessment methodologies and provides Arabic language educators with reliable tools to continuously monitor student progress and refining instructional strategies accordingly. The findings show that developing targeted training programmes directly addresses specific language skill deficiencies, which enables educators to design interventions with the most impactful support tailored to individual learning needs.

In this study, educators get valuable insights into selecting the most effective interventions for those with low language proficiency. A deeper understanding of cognitive processes and learning styles linked to language development enables teachers to make informed decisions on the best support for their learners, finally improving students' outcomes. Beyond the classroom, this research extends to educational institutions, students' personal development, and society. Improving language skills among preparatory school students contributes to raising educational standards, increasing effective communication, and empowering individuals to realize their full potential. The main contribution is the introduction of an NLP-based training programme integrating advanced deep learning techniques and detailed text analyses for enhancing students' language comprehension and expression. This approach is a significant promise in the improvement of language proficiency, making it worthwhile to future studies. The findings are an important step forward to supporting students' academic success and broader personal development.

The aims strengthen the programme's objectives by the emphasizes on the improvement of language skills among the study sample, in Iraqi general directorates of education. Additionally, it tests progress across multiple dimensions of language proficiency beyond the NLP training period. Measuring the programme's effectiveness in student improvement in many aspects of language development helps this refined approach give a clearer understanding of its effect. Also, it establishes a solid foundation for measuring the extent to which the programme improves students' general language growth.

## 2. Literature Review

NLP is a powerful approach to exploring the interaction between the mind (neuro),

language (linguistic), and behavioural patterns (programming) (Manana et al., 2024). It gives many arrays of tools and techniques for assisting individuals in understanding how their thoughts, emotions, and language affect their behaviours and results (Mohamed Bani Ismail & Jaber Al-Ajmi, 2024). The study and model of the successful strategies help NLP provide practical methods for transforming limiting beliefs, overcoming challenges, and enhancing communication and relationships (Ghanem et al., 2024). Widely applied across various fields such as personal development, training, education, and therapy, NLP consistently demonstrates its value (Salehi & Karimi, 2023). It enables individuals to make meaningful changes, boost their effectiveness, and achieve personal and professional goals.

NLP is a dynamic and versatile system delving deeply into the intricate connections between the mind, language, and behaviour (Almijbilee, 2023). It tests the strategies used by successful individuals to achieve their objectives and offers adaptable techniques tailored to replicate these strategies for personal success. The approach has many tools, like language patterns, visualization, anchoring, and reframing applied effectively in contexts like personal growth, communication, leadership development, and therapeutic interventions. By harnessing the power of language and understanding the thoughts, emotions, and action links, NLP offers a comprehensive framework for self-discovery, empowerment, and meaningful transformation enabling individuals to reshape their thinking, enhance communication, and cultivate positive beliefs and behaviours which guide them toward personal excellence and lasting success (Gökdere Çinar & Baykal, 2022).

Language skills can include abilities and competencies related to the effective use and understanding of language. The key components are reading, writing, speaking, and listening. Their proficiency in these areas enables communication of their thoughts and emotions clearly and effectively allowing them to accurately interpret and understand the messages of others. They are undeniably crucial in academic, professional, and social contexts, as they significantly facilitate learning, collaboration, and meaningful personal interactions. The development of language skills involves the active acquisition of vocabulary, grammar, and syntax, along with the continuous refinement of comprehension and expression abilities. Enhancing these skills can unlock new opportunities, promote cultural understanding, and empower individuals to engage more effectively with the world (Hendriana, Komarudin, & Mulyana, 2021).

NLP affects language skills by providing individuals with powerful tools and strategies to significantly improve their communication and give a deeper and more nuanced understanding of verbal and nonverbal language patterns shaping communication and perception. In addition, NLP refines listening skills, and enables individuals to better comprehend others and respond in a more thoughtful manner (Rayati, 2024). Its techniques improve speaking skills by clarity, confidence, and persuasive communication. It improves reading and writing skills through better comprehension, fluency, and creative expression. The integration of NLP makes individuals overcome language barriers, improve their language proficiency, and finally turn more effective and impactful communicators in diverse personal and professional contexts (Nayebi, 2024).

NLP is a highly valuable methodology, steadily gaining recognition because it significantly impacts personal and professional development with many techniques and tools specifically designed for better communication, cognitive patterns, and meaningful results (Thakre et al., 2023). NLP offers practical and effective communication strategies that enable thoughts clear and persuasive (Sanabria Araya, 2023). By NLP techniques, s relationship building, active listening, and interpreting nonverbal cues, individuals can

significantly improve their communication skills and foster stronger, more meaningful relationships (Jahan, Tariq, & Nadeem, 2022). Furthermore, NLP techniques can intensely progress communication verbal and nonverbal aspects of interaction. By developing rapport, practicing active listening, and mastering effective questioning techniques, NLP enables communication with greater clarity, understand others more deeply, and express their ideas (Hashmi, 2022). So, this work has set the following hypothesis.

H1: NLP importance such as Improved Communication Skills have a positive association with language skill development.

NLP actively enhances self-awareness by helping individuals gain a deep understanding of their thought patterns, beliefs, and behaviours. By gaining valuable insights into their internal processes, individuals can identify and transform limiting beliefs, overcome obstacles, and cultivate a more positive and resilient mindset (Rahaman & Pattnaik, 2024). This sharp self-awareness allows individuals to take control of their thoughts and actions which foster personal growth and improves decision-making. Moreover, NLP gives innovative tools for the acceleration of learning and memory improvement creatively applied to expand vocabulary and enhance language fluency. Numerous techniques help effectively retain new words and phrases to express themselves with greater confidence and precision (Ali & Al-Muslimi, 2024).

A study of use of NLP for enhancing verbal communication skills among students with learning disabilities showed promising results. Using a quasi-experimental research design, the study used NLP program as the independent variable and the students' verbal communication skills as the dependent, calculated before, during, and after the intervention. The results were encouraging; NLP significantly improved students' verbal communication skills (Mansouri et al., 2022). These improvements persisted long after the program concluded suggesting that NLP offers lasting benefits, rather than being a temporary fix, for students with problems in verbal communications. This study highlights the profound which endures the impact of NLP in helping learners with specific disabilities enhance their verbal interaction skills, with long-term benefits that extend well beyond the duration of the training (Ali & Al-Muslimi, 2024) establishing the following hypothesis.

H2: NLP significance like Enhanced Self-Awareness has a positive link with language skills progress.

NLP offers powerful and practical tools for effectively setting and attaining goals. Techniques- outcome framing and visualization set clear, actionable goals, create compelling success, and strategies. Moreover, NLP helps individuals in overcoming barriers and building motivation, which significantly enhances the likelihood of reaching their desired outcomes (Soethama & Sumaryana, 2023). The study creates a training program for kindergarten teachers on the use of NLP techniques implemented with young children to develop their dialogue abilities. The program enhanced communication between children and their surroundings by teaching them listen, accepting others, and showing mutual respect during conversations. Moreover, the program improved children's self-confidence by freely expressing themselves and articulate their opinions clearly (Zhang, Davarpanah, & Izadpanah, 2023). This initiative fostered meaningful communication, encouraging openness, and promoted confidence and collaboration—contributed to a more connected and thoughtful future.

This initiative broader vision benefit the teachers and has a lasting, positive effect on the children they work with. Pre- and post-measurement tools assessed the effect of NLP on the dialogue culture, with data collected by observation cards during the study. According to the findings, the training program stimulated kindergarten teachers to use NLP techniques for enhancing dialogue culture skills among their students at the kindergarten stages (Kazem, 2022) setting the following hypothesis.

H3: NLP significant Effective Goal Setting and Achievement have a positive link with language skill progress.

NLP techniques improve learning and skills by effective memory techniques which improve focus and concentration, and develop efficient learning strategies (Harrif, 2025). These methodologies help to absorb and retain information more effectively improving academic performance. NLP overcomes language barriers and dismantles beliefs hindering language acquisition and expression (Etuka, Athota, & Kearney, 2021). By reframing negative self-talk, individuals foster a positive mindset and boost language learning abilities. Moreover, NLP endorses reading and comprehension skills by chunking, visualization, and descriptive modelling, reading speed, comprehension, and critical thinking (Nek Rakami & Rokeman, 2023):

H4: NLP The significance such as Improved Learning and Study Skills has a positive link with language skill progress.

NLP offers essential leadership skills, practical techniques to build strong relationships, meet the needs of others, and inspire teams. NLP strategies develop leadership qualities, collaboration, and positive change in personal and professional environments (Rasheed et al., 2024). NLP enhances communication skills, self-awareness, goal achievement, learning abilities, and leadership qualities, empowering individuals to transform their thought patterns and achieve success in various life aspects. It encourages linguistic flexibility, enabling individuals to adapt communication styles to specific contexts, connect with diverse groups, and present themselves effectively (Ullah, Zahra, & Babbar, 2021). By adopting NLP, individuals can improve communication, expand vocabulary, and develop better language proficiency, particularly in foreign language teaching, enhancing self-confidence and achieving greater success (Dash & Rahaman, 2021; Doğan, Doğan, & Bağcı, 2022). Based on these literatures, the study has established the following hypothesis.

H5: NLP importance such as Effective Leadership and Influence Skills have a positive association with language skill development.

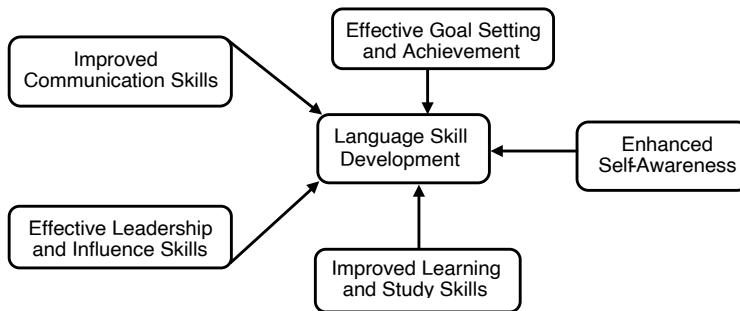
### **3. Research Method and Procedures**

The researcher employed a quantitative approach, with independent variables such as improved communication skills, enhanced self-awareness, effective goal setting and achievement, improved learning and study skills, and effective leadership and influence skills, and the dependent variable being the development of language skills. A single-group experimental design was utilised, with a sample of 357 students who exhibited deficiencies in language skills at the preparatory stage. The variables were assessed using questions derived from previous literature, including six questions to

measure improved communication skills (Najam, Bhatti, & Khatoon, 2023), five questions for enhanced self-awareness (Thoriquttyas, Faizin, & Ahsin, 2022), five questions for effective goal setting and achievement (Fakehy, 2022), four questions for improved learning and study skills (Najam et al., 2023), five questions for effective leadership and influence skills (Doğan et al., 2022), and four questions for the development of language skills (Kharatova, 2022).

The study's selected students as respondents, with 543 surveys distributed by personal visits to institutions and 357 valid responses were received, yielding a 65.75% response rate. To measure data reliability and the relationships between variables, the study used Smart-PLS, which is known for optimal results with primary data, even if complex models are employed (Hair, Howard, & Nitzl, 2020). The study used improved communication skills (ICS), improved self-awareness (ESA), effective goal setting and achievement (EGSA), better learning and study skills (ILSS), and effective leadership and influence skills (ELIS), alongside one dependent variable, language skills development (LSD) as in Figure 1.

**Figure 1: Theoretical Model.**



#### 4. Presentation and Interpretation of Results

The study inspects the correlation between items to measure convergent validity, by Average Variance Extracted (AVE) and factor loadings, with more than 0.50 for both tests. Convergent validity was tested by Cronbach's Alpha, with the stability coefficient for the scale dimensions exceeding 0.70. These stability coefficients were high and statistically significant at the 0.01 level which are valid for the current study. Moreover, the Composite Reliability (CR) coefficient for the scale dimensions was bigger than 0.70, so the reliability and stability of the questionnaire items suits the final application as in Table 1 and Figure 2.

The study examines correlation between variables for determining discriminant validity, by Fornell-Larcker criteria and cross-loadings. The results indicate that the correlations with the construct itself are larger than those with other variables, demonstrating a low correlation among the variables. These findings are presented in Table 2 and Table 3. Moreover, the study examines the correlation between variables to assess discriminant validity, using the Heterotrait-Monotrait (HTMT) ratio. The results indicate that the values are below 0.85, demonstrating a low correlation among the variables. These findings are presented in Table 4.

**Table 1: Convergent Validity.**

Constructs	Items	Loadings	Alpha	CR	AVE
Effective Goal Setting and Achievement	EGSA1	0.831	0.934	0.950	0.791
	EGSA2	0.944			
	EGSA3	0.874			
	EGSA4	0.877			
	EGSA5	0.917			
Effective Leadership and Influence Skills	ELIS1	0.896	0.914	0.936	0.745
	ELIS2	0.790			
	ELIS3	0.879			
	ELIS4	0.880			
	ELIS5	0.867			
Enhanced Self-Awareness	ESA1	0.849	0.836	0.884	0.604
	ESA2	0.756			
	ESA3	0.764			
	ESA4	0.805			
	ESA5	0.707			
Improved Communication Skills	ICS1	0.899	0.879	0.909	0.628
	ICS2	0.845			
	ICS3	0.730			
	ICS4	0.666			
	ICS5	0.748			
	ICS6	0.841			
Improved Learning and Study Skills	ILSS1	0.866	0.890	0.924	0.752
	ILSS2	0.867			
	ILSS3	0.903			
	ILSS4	0.831			
Language Skill Development	LSD1	0.767	0.794	0.866	0.618
	LSD2	0.791			
	LSD3	0.798			
	LSD4	0.788			

**Table 2: Fornell Larcker.**

	EGSA	ELIS	ESA	ICS	ILSS	LSD
EGSA	0.889					
ELIS	0.591	0.863				
ESA	0.416	0.475	0.777			
ICS	0.524	0.461	0.539	0.792		
ILSS	0.470	0.520	0.497	0.611	0.867	
LSD	0.556	0.603	0.670	0.656	0.655	0.786

**Table 3: Cross-Loadings.**

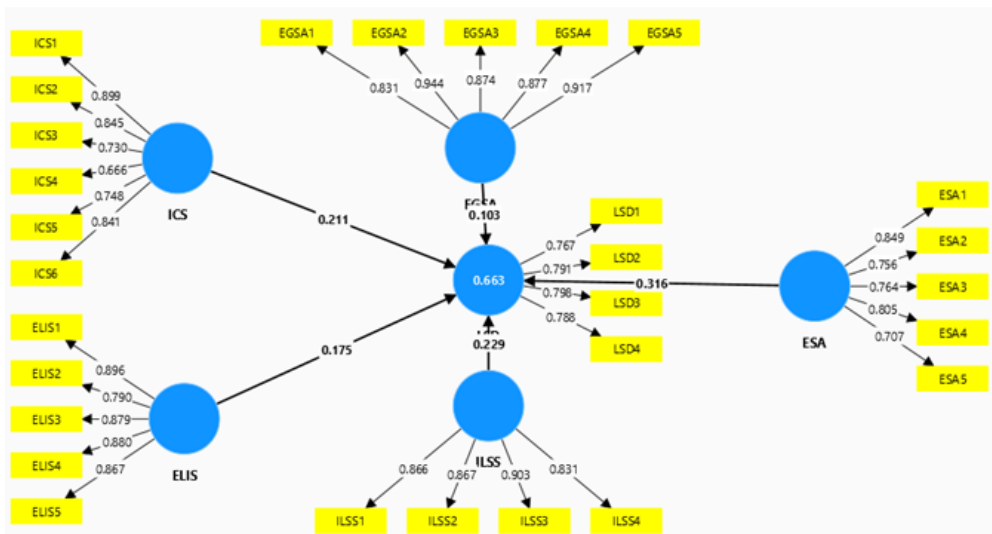
	EGSA	ELIS	ESA	ICS	ILSS	LSD
EGSA1	<b>0.831</b>	0.525	0.366	0.438	0.443	0.439
EGSA2	<b>0.944</b>	0.544	0.328	0.475	0.428	0.477
EGSA3	<b>0.874</b>	0.497	0.371	0.457	0.382	0.533
EGSA4	<b>0.877</b>	0.557	0.467	0.506	0.438	0.555
EGSA5	<b>0.917</b>	0.497	0.295	0.441	0.396	0.444
ELIS1	0.529	<b>0.896</b>	0.430	0.405	0.474	0.545
ELIS2	0.544	<b>0.790</b>	0.402	0.391	0.408	0.526
ELIS3	0.494	<b>0.879</b>	0.393	0.401	0.466	0.510
ELIS4	0.498	<b>0.880</b>	0.440	0.403	0.449	0.532
ELIS5	0.479	<b>0.867</b>	0.379	0.386	0.442	0.483
ESA1	0.349	0.382	<b>0.849</b>	0.483	0.449	0.603

	EGSA	ELIS	ESA	ICS	ILSS	LSD
ESA2	0.350	0.439	<b>0.756</b>	0.452	0.418	0.525
ESA3	0.368	0.374	<b>0.764</b>	0.362	0.336	0.535
ESA4	0.266	0.302	<b>0.805</b>	0.411	0.369	0.494
ESA5	0.273	0.346	<b>0.707</b>	0.378	0.349	0.423
ICS1	0.442	0.408	0.463	<b>0.899</b>	0.600	0.595
ICS2	0.430	0.424	0.417	<b>0.845</b>	0.487	0.537
ICS3	0.408	0.298	0.460	<b>0.730</b>	0.372	0.424
ICS4	0.433	0.321	0.392	<b>0.666</b>	0.381	0.451
ICS5	0.397	0.380	0.459	<b>0.748</b>	0.501	0.572
ICS6	0.387	0.339	0.372	<b>0.841</b>	0.522	0.508
ILSS1	0.370	0.440	0.408	0.554	<b>0.866</b>	0.566
ILSS2	0.408	0.458	0.409	0.551	<b>0.867</b>	0.605
ILSS3	0.460	0.485	0.477	0.532	<b>0.903</b>	0.567
ILSS4	0.390	0.417	0.431	0.478	<b>0.831</b>	0.528
LSD1	0.340	0.439	0.548	0.530	0.550	<b>0.767</b>
LSD2	0.399	0.468	0.662	0.434	0.553	<b>0.791</b>
LSD3	0.495	0.520	0.452	0.554	0.463	<b>0.798</b>
LSD4	0.522	0.469	0.431	0.553	0.488	<b>0.788</b>

**Table 4: Heterotrait Monotrait Ratio.**

	EGSA	ELIS	ESA	ICS	ILSS	LSD
EGSA						
ELIS	0.637					
ESA	0.462	0.542				
ICS	0.579	0.511	0.629			
ILSS	0.515	0.575	0.575	0.682		
LSD	0.642	0.707	0.810	0.783	0.775	

**Figure 2: Measurement Assessment Model.**



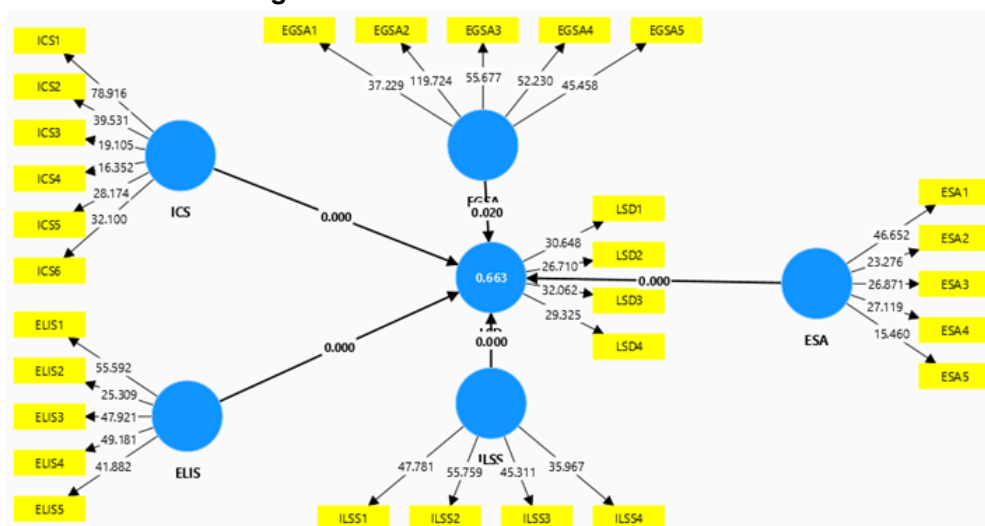
The path analysis results indicated a significant positive impact of the NLP program’s key components, including improved communication skills, enhanced self-awareness,

effective goal setting and achievement, improved learning and study skills, and effective leadership and influence skills, on language skills development. Consequently, H1, H2, H3, H4, and H5 were accepted. These findings are detailed in Table 5 and Figure 3.

**Table 5: Path Analysis.**

Relationships	Beta	Standard Deviation	T Statistics	P Values
EGSA -> LSD	0.103	0.044	2.341	0.020
ELIS -> LSD	0.175	0.047	3.753	0.000
ESA -> LSD	0.316	0.048	6.628	0.000
ICS -> LSD	0.211	0.054	3.882	0.000
ILSS -> LSD	0.229	0.046	4.994	0.000

**Figure 3: Structural Assessment Model.**



## 5. Discussion

This research study reveals significant findings regarding how NLP-based training supports the enhancement of language skills in Iraqi preparatory school students. The analysis indicates that five distinct independent variables—improved communication skills, effective goal setting and achievement, enhanced leadership skills, self-awareness, and learning capabilities—directly contribute to language skill development. The following analysis contextualises these findings with relevant past research. The results suggest that students who received NLP-based instruction exhibited enhanced language expression skills. Studies, such as Alfadil (2020), confirm that strong communication skills are foundational to second language acquisition. Participants in NLP training improve spoken and non-verbal communication skills expressing their thoughts effectively, engaging in meaningful conversations, and better absorbing linguistic information. NLP techniques—mirroring, active listening, and rapport-building improve linguistic understanding. Vercellotti (2019) helps this through the demonstration of a language learner’s higher levels of syntactic complexity and fluency through the effective communication strategies. Refined communication

patterns from NLP-based training internalise grammar rules more effectively, smoother and more natural language flow.

Furthermore, NLP-based training, incorporating goal-setting, significantly enhanced language acquisition. Goal setting is crucial in self-regulated learning, as students need clear, achievable targets for guiding their progress. Seli (2019) shows the benefits of structured goal setting, in language learning, by motivation and perseverance. NLP-based training, with its emphasis on outcome-oriented learning, establishes specific linguistic aims and systematically track their development. So, learners retain language content and improved speaking and writing accuracy (Teng, Wang, & Zhang, 2022). Visualisation techniques and monitoring their achievements, develop a sense of accountability, sustaining their efforts and their language skills over time.

The fundamental connection between leadership growth and language acquisition is cleat by leadership training, enhancing self-confidence, speaking abilities, and argumentative skills—key components of linguistic proficiency. The students undergoing NLP-based leadership training improved self-expression and fluency in their target language. Atristain-Suárez and Castañón-Cervantes (2024) stated leadership training encourages discussions actively, foster assertive communication, and build relationships with progress in language mastery. The integration of NLP techniques- modelling and reframing, develops effective communication strategies, enhances their language persuasively.

According to Wale and Bishaw (2020), leadership training improves critical thinking and adaptability, contributing to more effective second-language communication. NLP-based leadership training raises active language use by role-playing and persuasive methods, increasing students' speech confidence and language proficiency. Furthermore, NLP-based educational methods progress learning efficiency and study skills advancing in language capabilities. Cognitive processes in language acquisition are optimised by motivational learning technique-mental mnemonics, pattern recognition, and self-awareness exercises. Dessi et al. (2019) supports structured study methods and mental processing- chunking, anchoring, and mental rehearsal, significantly improve students' ability to recall and apply language. These techniques encode linguistic information, reduce mental overload, and improve long-term language retention (Feng, 2025). NLP-based training help processing input more effectively, recognising language patterns, and learning systematically, eventually improving language proficiency.

Based on the results, students who improved their self-awareness through NLP training made significant enhancement in their language skills. Self-awareness identifies their strengths and weaknesses in language, to design effective learning strategies and build confidence by the language. Teng (2020) state students with better self-awareness improved metacognitive control, thus enhancee their language acquisition and application. NLP-based self-reflection, by techniques like perceptual positioning and timeline therapy, helps in understanding language development, necessary adjustments. Wang, Xin and Chen (2024) confirm that heightened self-awareness fosters resilience and motivation to overcome challenges in language learning. The recognition of their competencies, students more deeply learn language learning, boosting their proficiency and enhancing their confidence by the language.

## 6. Conclusion

A training programme based on NLP techniques produces a significant positive

outcome in enhanced language skills among Iraqi preparatory school students. The improved communication abilities, aim achievement, leadership skills, study methods, and self-awareness collectively improve linguistic competence. These variables reinforce key features of language acquisition by cognitive functions, behavioural adaptations, and psychological mechanisms. As a cohesive approach, NLP-based techniques enriched language learning environment, accuracy and fluency while boosting student confidence. The findings verify existing research on the multifaceted nature of language acquisition attaching importance to integrating strategic psychological methods in language teaching because of the rise in the demand for student-centred teaching approaches, NLP interventions provide structured, dynamic, and result-oriented frameworks for language instruction. Future studies are required to explore the broader effects of such training across various language contexts and educational levels to assess its long-term benefits in language learning and academic achievement.

## **6.1. Recommendations**

The research concluded with recommendations to enhance language skill development. First, incorporating NLP-based activities can focus on language skills into educational curricula, particularly for Arabic in Iraq. Moreover, the study supporters for the founding of dedicated classes to support preparatory school students struggling with language skills, using the NLP training programme as an effective tool. Organising NLP training courses for Arabic language teachers and parents enable them to contribute to the growth of students' language abilities. Also, the study calls for an NLP-based guide specifically designed for language skill development, by the relevant authorities and distributed to schools across Iraq. To monitor progress, evaluation tests that track students' language skill development is important, with an emphasis on addressing weaknesses by collaboration between teachers and parents. Lastly, the study suggests financial and moral rewards to teachers integrating NLP programmes into their educational materials recognising their efforts by support from the relevant authorities.

## **6.2. Research Limitations**

The study has certain limitations. One is solo focus on examining the effect of an NLP-based training programme on the language skills development of among preparatory school students in Iraq's general directorates of education in Baghdad. Moreover, it was confined to preparatory schools in the general directorates of education, targeting students from this educational sector. The research was during the academic year 2024-2025, and the sample was 357 preparatory school students from schools limiting the generalisability of the findings to other areas or educational levels.

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