

Neuro-Linguistic Programming, Willingness to Communicate, Sensory Motivation and Language Achievement: A Case of Iraqi Learners

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Abstract Considering that neuro-linguistic programming (NLP) is a vital approach to foreign language teaching, this study aims to explore the correlation between NLP and other factors that can influence this domain, namely, second language willingness to communicate (L2WTC), sensory motivation, and foreign language achievement. Adopting a quantitative design, 199 Iraqi EFL learners from intermediate to advanced proficiency levels were recruited to complete a newly developed NLP-Student Version Scale (NLP-SVS) along with the L2WTC scale and the active/passive motivation scale (APMS). The results confirmed the psychometric validity of the NLP-SVS. Moreover, the findings demonstrated a significant correlation among NLP-SVS, APMS, and L2WTC. Likewise, L2WTC significantly correlated with NLP and APM. Furthermore, NLP proved to predict foreign language achievement when mediated by sensory motivation (active and passive subconstructs). The results indicated that NLP, mediated by active/passive motivation, is a positive predictor of L2WTC. Lastly, implications and suggestions for further research were offered.

Keywords: Neuro-linguistic programming, Willingness to communicate, Active/passive motivation, Foreign language achievement

1. Introduction

ttaining excellence in communication is the target of EFL learners when they head to study a second or foreign language. Digging into the elements that can affect the foreign language teaching and learning environment, neuro-linguistic programming (NLP) was found to be "the psychology of excellence" as described by Hardingham (1998, p. 12) for its vital role in achieving performance excellence among EFL learners through enhancing language instruction. Creating a successful classroom environment by language teachers, targeting performance excellence, requires their recognition of the diverse backgrounds and individual differences among their students in pertaining to the right teaching techniques and strategies. NLP has been shown to improve language learners' performance, classroom communication, attitudes, and motivations, increase

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This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). self-esteem, and facilitate personal development (Thornbury, 2001, cited in Millrood, 2004). However, in L2 learning, teachers' motivation has been largely overlooked (Craft, 2005). It has been taken for granted that teachers are themselves highly driven and dedicated to their work. Increasing social demand for encouraging creative thought has sparked what Craft (2005) called a "revolution of creativity in education". The existing literature recognizes motivation as connected with social processes and people's collective habits (Bourdieu, 1986; Pishghadam et al., 2019a). Few studies over the past two decades have built and summarized motivating strategies for instructors to use in the classroom (Williams & Burden, 1997). Moreover, Dörnyei (2001) combined some relevant motivational components into a multilevel, second-language motivational construct for a pedagogical understanding of second-language motivation.

The awareness and application of NLP techniques in classroom teaching assessed by Millrood's questionnaires (2004) proved that teachers who were aware of these techniques enabled learners to participate in class, gave them more chances, and programmed their success. These techniques embrace establishing a rapport between teacher and learners, modeling the learner, creating a learner filter, pacing with the learner, leading the learner, elicitation with the learner, calibration of the learner, reframing the approach, and collapsing an anchor.

In 2011, Pishghadam et al. gave an additional dimension to the understanding of NLP pertinent to the field of English language learning and teaching by constructing and validating an NLP scale to investigate English language teachers' incorporation of NLP techniques in their teaching performance. The study underlined NLP's power in bringing up change within pedagogical settings.

The application of NLP techniques recognizes subjective experience (Tosey et al., 2005) in modeling the learners to learn and gain the art of "communication excellence" (Kudliskis & Burden, 2009, as cited in Pishghadam, 2011). Within the same realm, second language willingness to communicate (L2WTC), was found to have a significant indication of second language acquisition (SLA), as suggested by Makiabadi et al. (2019). Fostering L2WTC entails changing the learners' attitude from the resistance mode to communicate into the satisfactory mode to do so (MacIntyre, et al., 1998). In order to achieve this change, tackle anxiety, and sustain effective communication, scholars suggest providing learners with training and practices for communication skills (Çakıcı et al., 2017, as cited in Gürbüz et al., 2023). Likewise, teachers need to have a rapport with these learners, dealing with their perceptions of the world, indulging their senses differently, and stimulating all their motivations, making use of the subjective and constructive nature of NLP (Craft, 2001). Furthermore, NLP encompasses the functions of the "left/right brain", the "visual/auditory, kinaesthetic" learning styles, multiple intelligences, as well as other fields of research through which the importance of an individual learner and his/her modes of learning styles are identified. Therefore, the positive effect of NLP in creating the required rapport can be visualized easily in teaching strategies enhancement, solving personnel issues, and harmonizing students-teachers' communication to attain a major NLP characteristic, i.e., excellence.

Motivation as a decisive construct in the EFL classroom is rooted in behaviorism and touched upon significantly by Pishghadam (2019) when he discussed the two cornerstones of motivation: engagement, which is mental, and involvement, which is sensory (behavioral). Thus, it's more likely that people get more motivated and enthusiastic when they are actively engaged in an activity based on Leiter and Maslach's (2017) illustration of motivation. In the field of education, particularly in L2 classrooms, interacting with learners and addressing their senses can lead to language achievement based on Alami's (2020) discussion, where learners' sensory motivation is found to have a significant relationship with their language achievement.

Although previous studies recognized a positive correlation between students' L2WTC and sensory motivation, i.e., the more students' senses are involved, the more they are willing to communicate in the classroom (Makiabadi et al., 2019), and teachers' success as a result of teachers' awareness and right conformation to NLP techniques (Pishghadam et al., 2011). there has been scant attention given to learners' perception of NLP techniques implemented by their teachers. Therefore, evaluating the psychological aspect of NLP techniques through learners' perception of the implementation of these techniques in the classroom context needs to be empirically investigated to assess the relationship

between NLP and the two variants of sensory motivation and L2WTC in the prediction of foreign language achievement.

The first objective of this study is to develop a scale to examine students' perspectives toward the implementation of NLP techniques by teachers and then explore its psychometric validity. Moreover, this study sets out to determine the possibility of any significant relationships among teachers' implementation of NLP techniques, students' L2WTC, their sensory motivation, and language achievement. Subsequently, this study assesses the effect of NLP techniques on the learners' L2WTC and sensory motivation and the effect of these three variables on their language achievement.

2. Theoretical Framework

2.1. NLP (Neuro-Linguistic Programming)

Neuro-Linguistic Programming was initiated by John Grinder and Richard Bandler, a mathematics and computer science student, at the University of California in the 1970s. The authors emphasized how individuals think rather than what they think (Darn, 2010) as they recognized the importance of eye contact and movement in identifying emotional states. Since then, NLP has gained popularity among educators, managers, trainers, market researchers, counselors, consultants, physicians, lawyers, and other professionals for communication and personal development. Having its roots in psychology and neurology, NLP seeks to understand how the brain operates and how it can be trained to improve its function. Tosey et al. (2005) suggested that the term NLP, in its broadest sense, implies that an individual represents an entire mind-body system in which internal experiences (neuro), language (linguistic), and behavior (programming) are interconnected in a patterned manner.

"Neuro", being derived from the Greek word neuron (a nerve), refers to the neurological processes resulting in behavior. The term "linguistic" (derived from the Latin word lingua, which means language) denotes the representation, order, and sequencing of neural processes into models and strategies using language and communication. "Programming", as the name suggests, indicates the orderly organization of a system's components (in this case, sensory representations) for achieving particular objectives. Accordingly, neuro-linguistic programming (NLP) is a method for modifying and encoding behavior that is used by humans in order to regulate, transmit, and reform behavioral patterns (Dilts et al., 1980). In other words, NLP is seen both as a technology for communication and personal development, as well as a modeling process. Another perspective of NLP is its incorporation with the functions of the "left/right brain", the "visual/auditory, kinaesthetic" learning styles, multiple intelligence, as well as other fields of research through which the importance of an individual learner and his/her modes of learning styles are identified.

In a classroom environment, recognizing the learning styles of different learners by their teachers and modifying the teaching process, establishing a synesthesia of patterns, strategies, and anchors both inside and outside the classroom can achieve positive change from an unsatisfactory condition towards a better required one as described by O'Connor (2001). At this point, O'Connor suggested that rapport and effective relationships are needed to understand the others from their own point of view (2001). Therefore, the positive effect of NLP in creating the required rapport can be visualized easily in teaching strategies enhancement, solving personnel issues, and harmonizing students-teachers' communication to attain a major NLP characteristic, i.e., excellence.

Delving into the second/foreign language acquisition arena, NLP was initiated by Richards and Rodgers (2001), and Millroad (2004) as a supplemental technique to teaching a second language. They further described it as "A method of teaching a foreign language that helps learners achieve excellence in performance" (p. 28). As such, it has momentous potential for teaching and learning a foreign language.

2.1.1. NLP Techniques

Based on its subjective and constructivist nature (Craft, 2001), a distinctive presentation of NLP techniques was proposed by psychologists and scholars because they highlight practical knowledge over theoretical understanding of the language. Having said that, maintaining positivity in teachers' interactions with their students and improving communication in the classroom is the aim of the

educational process. Therefore, to improve second language instructions, Millrood (2004) decided the following classification for NLP techniques:

Establishing rapport with learners depending on the teacher's support, empathic inclinations, and interactions with them can create a supportive and comfortable atmosphere, whilst ignoring or denying a rapport could be detrimental to the learning process (Millroad, 2004). Modeling students through providing them with strategies makes them achieve better results. To elaborate, listening to a native speaker and paying attention to his/her body gestures, lip movements, and pronunciation can be a practical technique that can be easily adopted by language learners to improve fluency (Delbio & Ilankumaran, 2018). Creating a learner filter technique, other than the learners' own filters, by monitoring and verifying students' correct/incorrect behavior and knowledge is another NLP technique. This technique identifies personal beliefs, values, decisions, and memories through which individuals learn; therefore, these NLP filters can elucidate the different strategies and styles in the language learning process (Darn, 2010). Pacing with the learner, i.e., synchronizing the rate, style, and production of teachers and learners, is crucial. The failure to keep the required pace could have disastrous effects on a student, particularly if s/he has low adaptability (Millroad, 2004). As a method of guiding learners to an output, Millroad suggested the elicitation technique by employing cognitive challenges for them. As for the calibration technique, it entails recognizing individual differences among learners, therefore approaching them differently. The process of reframing would begin when certain strategies failed to meet objectives, i.e., alternative ones had to be considered and used. To decrease stress, fear, and anxiety level among learners and reinforce their achievements and success, Millrood (2004) suggested that the anchoring approach is a psychological technique through which the teacher provides his students with some inputs, like asking some questions, to bring out their internal ideas.

Similarly, Pishghadam et al. (2011) determined that teachers are able to achieve success and progress in their field via NLP techniques' usage and through understanding the changes they can bring to their learners' motivation and improvement, in addition to the learning and teaching context, which in turn increases their awareness of their potential. This study encountered techniques or factors applied by language teachers developed as a questionnaire, then validated and used. These factors were Flexibility, Anchoring, Elicitation, Modeling, Individual differences, Leading, Establishing Rapport, and Emotional and Cognitive Boosters.

Highlighting the importance of teachers' recognition attained by NLP techniques application, Shirzadeh and Jajarmi (2023) proposed the positive impact of teacher stroke on students' emotions as a result of the positive correlation between teacher stroke and WTC and FLA. The results harmonized with former research by Pishghadam et al. (2019) and Rajabnejad et al. (2017), where a positive correlation was reported between stroke and WTC.

2.2. L2 Willingness to Communicate (L2WTC)

As a concept related to L1, WTC originated in McCroskey and Baer's (1985) work when they defined it as the possibility to start a communication when there is a chance for talking. Thus, it is considered as a conscious and intentional action practiced by an individual who seeks to communicate. Delving into the L2 domain, a series of studies have indicated that willingness to communicate in L2 correlates with variables like communication anxiety, personality, motivation, self-confidence, self-perceived communicative competence, etc. (Clement et al., 2003; Yashima et al., 2004). Despite teachers' keenness to emphasize the vital role of communication in the target language throughout the L2 learning process, some of the learners still do not have the enthusiasm to speak the language even if they have the perceived competence needed. In this respect, WTC is seen as a stable trait-like construct that can be possessed by an individual regardless of interlocuters and the communication contexts (McCroskey & Baer, 1985, as cited in MacIntyre, 2007). However, the situation in a second language classroom is more challenging since L2 WTC should be understood as a construct that comprises both state and trait characteristics, as stated by MacIntyre et al. (1998). Trait L2WTC is an important feature resulting from individuals' differences in L2 communicative competence.

From an experimental and observed viewpoint, the construct of L2WTC has been examined thoroughly. In one study carried out by Ghonsooly et al. (2012), L2WTC was examined among Iranian students, and it was found that L2WTC could be predicted based on attitudes toward the international community and self-confidence in the L2. Another study carried out by Khajavy et al. (2016) scrutinized L2WTC among Iranian learners of English in the classroom setting and found that classroom environment is the most predictive factor of L2WTC. Similarly, a significant relationship was reported between learners' levels of communication in confidence in L2 (English), i.e., feeling confident enough to communicate in L2, and their outgoing personality (Gürbüz et al., 2023).

In light of the interactive atmosphere prevalent in most EFL classes, the quality of teachers' strategies, and the consideration of individual differences that do influence language learners' WTC, the role of motivation in EFL learners' WTC was investigated. The results from Lahuerta's study (2014) indicated a positive association between WTC and motivation to learn English. In relation to language achievement, a study conducted by Mahmoodi and Moazam (2014) identified a significant correlation between WTC and Arabic achievement. That is, students who expressed eagerness to communicate showed a higher level of L2 achievement.

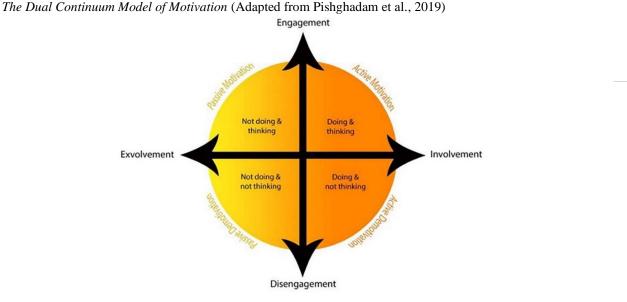
2.3. Active/Passive Motivation

In order to comprehend motivation, we need to understand various theories that have roots in behaviorism, cognitivism, humanism, and social constructivism (Pishghadam et al., 2019). It has been argued that motivation stems from human behavior and external rewards (Behaviorism) (Pishghadam et al., 2019; Staddon, 2001). According to humanism, internal motivation drives a human to do things (Maslow, 1943), while in cognitive theory, the intrinsic/extrinsic classification is based on the attractiveness of the results (Vroom, 1964; Porter & Lawler, 1968). In social constructivism, the process is viewed as a reflection of the collective habits of people (McCaslin, 2009; Pishghadam et al., 2019). The importance of L2 motivation was also considered by Gardner and Lambert (1972), who took a social-psychological approach to it, introducing integrative motivation (the tendency to be similar to the L2 group) and instrumental motivation (the desire to gain potential gains by using L2 proficiency) (Dörnyei, 1994; Dörnyei & Csizér, 1998).

In 2019, Pishghadam et al. adopted a new and different viewpoint of motivation when they developed the dual continuum model of motivation (Figure 1) based on the two vital constructs of engagement and involvement. Engagement refers to active physical participation in a particular activity (Kahn, 1990), whereas involvement is rooted in emotion, which refers to the emotions evoked by the senses employed in the perception of something. Involvement entails experiencing something directly or conducting research about it to gain more insight (Pishghadam et al., 2016).

The dual continuum model of motivation provided a more detailed understanding of motivation employing the immersion concept (action and cognition). Additionally, and more importantly, the model highlights motivation's active and passive extents. Therefore, the dual continuum model embraces engagement as one continuum along with an independent continuum of involvement. Thinking is a mental activity, while doing is a physical activity. These two constructs are interrelated but distinct from each other. Engagement existence/nonexistence, i.e., disengagement, is associated with the different levels of "sensory involvement (exvolvement and involvement), splitting the model into two parts (active and passive) and four slices (active motivation, active demotivation, passive motivation, and passive demotivation)" (Pishghadam et al., 2019, p. 5). Delving more into this model, it is noticeable that active motivation means being actively engaged while performing a task; this same task becomes a mechanical process if mental involvement does not exist, turning it into active demotivation. Passive motivation describes the status when individuals do think about something constantly while not doing it due to lack of opportunity. Finally, passive demotivation occurs when neither a cognitive activity nor a physical one is conducted with respect to a task, as discussed by Pishghadam et al. (2019).





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Utilizing the Dual Continuum Model of Motivation in her study, Alami (2020) developed and validated the Active/Passive Motivation Measurement Scale comprising three constructs (cognitive, sociocultural, and sensory). A positive correlation between cognitive active motivation and foreign language achievement was displayed, which can be attributed to the cognitive nature of the language learning itself since English learning is cognitively based. As a whole, 30 items were included under a 6-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). As illustrated by Pishghadam et al. (2021) the scale has six sub-constructs: cognitive active motivation (CA, 4 items), cognitive passive motivation (CP, 4 items), socio-cultural active motivation (SoA, 4 items), sociocultural passive motivation (SoP, 4 items), sensory active motivation (SeA, 4 items), and sensory passive motivation (SeP, 4 items). The internal consistency of the scale is .90, based on Alami's report (2020).

Given its advantageous effect on the entire system of education, Active Motivation (AM) and Passive Motivation (PM), including their cognitive and socio-emotional subconstructs, were found to have a positive correlation with teacher sense of efficacy. That is, teachers who were motivated, either actively or passively, performed more efficiently and could tackle the difficulties in their class activities. Moreover, it was concluded that a socio-emotionally actively motivated language teacher enjoys maintaining a friendly relationship with learners as well as learning social skills such as effective communication and a sense of humor.

Hence, the level of motivation teachers experience may be subjective to their perception of themselves and what is happening around them, the type of interactions they experience with colleagues and students, as well as their emotional response to their environment (Momenzadeh et al., 2023). Despite all the above-mentioned studies on teachers' employment of NLP techniques in foreign language (FL) classes, the implications of sensory motivation, and L2WTC in ELT, a closer look at the literature reveals gaps and shortcomings regarding the students' perceptions of NLP techniques and whether they can lead to FL achievement when mediated by sensory motivation. Furthermore, considering L2WTC as an objective for most language learners, an assessment is required for the role of NLP techniques in fulfilling this potential.

3. Methodology

3.1. Participants

Based on convenience sampling, the population targeted in this study were 199 Iraqi EFL learners, males (N = 66) and females (N = 133) with intermediate and advanced proficiency levels of language

ranging from 20 to 60 years old. A wide range of academic backgrounds were represented among the participants, with the last score in English ranging from 40 to 100 out of 100, with Arabic as their mother tongue language.

3.2. Instrumentations

— 3.2.1. NLP-Student Version Scale (NLP-SVS)

To examine learners' perception of NLP implementation, the NLP Scale (Student Version), which was developed based on the Neuro-linguistic Programming Questionnaire (NLPQ) (Pishghadam et al., 2011) was employed (see Appendix for the items). The scale comprised 30 items on a five-point Likert scale type ranging from Strongly Disagree (1), Disagree (2), Undecided (3), Agree (4), to Strongly Agree (5). The scale focused on the six factors of flexibility, elicitation, modeling, individual differences, leading, and establishing rapport, each of which entailed 4-6 entries.

3.2.2. Active/Passive Motivation Measurement Scale (APMS/English Version)

The second questionnaire employed was Alami's Active/Passive Motivation Measurement Scale (2020), comprising cognitive, sociocultural, and sensory constructs with a total of 24 items. Targeting Iraqi EFL learners, the questionnaire was translated from Persian into English with a Cronbach's alpha estimate of .90, indicating its reliability.

3.2.3. L2 Willingness to Communicate Scale

Khajavy's (2012) second language willingness to communicate scale was the third instrument employed along with the above-mentioned questionnaires. The two underlying variables present in the questionnaire were L2 self-confidence, which is characterized by a lack of communication anxiety and perception of communication competence in English, and international posture, which is determined by four indicators: orientation toward intercultural friendship, approach-avoidance tendency, interest in international careers and events, and interest in foreign affairs. Cronbach's alpha is .94, indicating the reliability of L2 willingness to communicate scale.

3.3. Procedure

Firstly, a new scale was created for Iraqi EFL students using a straightforward procedure. It started with developing the questionnaire based on some of the factors of Pishghadam et al.'s (2011) NLPQ. Some of the items were modified to be valid for students to answer, and some more items were added to the scale. Then, the scale was revalidated via Conformity Factor Analysis (CFA) to be administered in conjunction with the Active/Passive Motivation scale and the L2Willingness to Communicate questionnaire.

To assess learners' perceptions of the implementation of NLP techniques, the constructed 30-item scale took into account six factors (flexibility, elicitation, modeling, individual differences, leading, and establishing rapport) comprising 4-6 items for each. The rationale behind choosing flexibility is the benefit EFL learners may get when choosing teaching methods, rates, communication styles, and instructional strategies (O'Connor, 2000). Utilizing cognitive techniques and encouraging learners' creativity, elicitation empowers them to take responsibility for their own learning (Millrood, 2004). As for the modeling factor, Delbio and Ilankumaran (2018) asserted that students' fluency can be improved by providing samples of previous assignments to them as a model. As a teacher, recognizing and accommodating each learner's individual differences and giving them ample time to write down notes and share their opinions can enhance rapport between the teacher and the student, resulting in a comfortable learning zone (Millrood, 2004). Lastly, the leading factor, through providing EFL learners with words or grammar that they need for a conversation, is an example that fosters self-actualization and development among successful learners by providing a conducive environment within the classroom.

The three questionnaires were designed as a Google form and sent via WhatsApp and email to several Iraqi language institutions in different cities of Iraq, in addition to paper-based ones distributed among other institutions. By employing a quantitative correlational design, the objectives of the study were attained. To determine potential correlations between the variables, Pearson product-moment

correlation was used. An analysis of structural equation modeling (SEM), utilizing Amos, was conducted in order to endorse the predictive power of the independent variables: To assess the reliability of the NLP-Student Version Scale, Cronbach's alpha coefficient was calculated.

4. Results

As the first step, descriptive statistics, including mean and standard deviation for the NLP-SVS, APMS, and L2WTC, were presented. Employing Cronbach's alpha, the overall reliabilities of the main variables, along with their subconstructs, were above .70, which is considered acceptable.

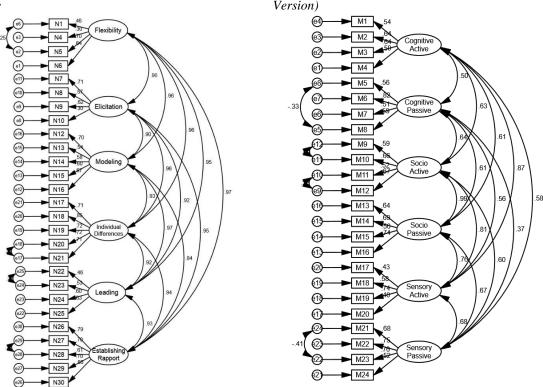
Confirmatory Factor Analysis (CFA) was used to verify the construct validity of the NLP-SVS. Standardized factor loadings can be seen in Figure 2. Three items (items 2, 3, & 11) were removed from the scale to improve model fit (see Table 2 for the goodness of fit indices).

Figure 3

Measurement Model for the APM Scale (English

Figure 2

Measurement Model for the NLP-Student Version Scale



CFA was also run for the APMS (English Version). Standardized factor loadings can be seen in Figure 3. No items were removed from the scale for model fit (see Table 2 for the goodness of fit indices).

The outcomes of Pearson product-moment correlation (Table 1) revealed a significant correlation among some of the variables. NLP and its subconstructs were significantly correlated with A/PM (r = .35, p < 0.01) and all its subconstructs (i.e., active (r = .30, p < 0.01), cognitive active (r = .25, p < 0.01), sociocultural active (r = .27, p < 0.01), sensory active (r = .22, p < 0.01), passive (r = .36, p < 0.01), cognitive passive (r = .29, p < 0.01), sociocultural passive (r = .28, p < 0.01), and sensory passive (r = .27, p < 0.01). NLP was also correlated with L2WTC (r = .28, p < 0.01) along with all its subconstructs, including meaning-focused (r = .25, p < 0.01) and form-focused activities (r = .27, p < 0.01). Moreover, APM showed a significant correlation with L2WTC (r = .51, p < 0.01) and all its subconstructs, including meaning-focused (r = .49, p < 0.01) and form-focused activities (r = .43, p < 0.01). Therefore, L2WTC was significantly correlated with NLP, APM, and all their subconstructs. FLA had a significant relationship with APM (r = .18, p < 0.01), passive (r = .21, p < 0.01), cognitive passive (r = .16, p < 0.05), and sensory passive (r = .19, p < 0.01).

I

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. NLP	1																			
2. Flexibility	.78**	1																		
Elicitation	.86**	.63**	1																	
Modeling	.84**	.63**	.64**	1																
 Individual Differences 	.89**	.63**	.75**	.71**	1															
Leading	.80**	.52**	.64**	.64**	.62**	1														
 7. Establishing Rapport 	.86**	.60**	.71**	.61**	.72**	.68**	1													
8. A/PM	.35**	.29**	.27**	.30**	.30**	.34**	.28**	1												
9. Active	.30**	.23**	.24**	.21**	.28**	.30**	.25**	.93**	1											
10. Cognitive Active	.25**	.15*	.19**	.20**	.23**	.28**	.20**	.72**	.81**	1										
11. Socio- cultural Active	.27**	.24**	.24**	.19**	.25**	.21**	.23**	.78**	.81**	.46**	1									
12. Sensory Active	.22**	.17*	.16*	.13	.20**	.25**	.20**	.78**	.83**	.55**	.51**	1								
13. Passive	.36**	.31**	.27**	.34**	.29**	.34**	.28**	.94**	.76**	.56**	.67**	.64**	1							
14. Cognitive Passive	.29**	.23**	.17*	.30**	.22**	.33**	.23**	.66**	.50**	.42**	.44**	.36**	.73**	1						
15. Socio- cultural Passive	.28**	.22**	.24**	.26**	.22**	.26**	.22**	.80**	.68**	.45**	.70**	.51**	.82**	.43**	1					
16. Sensory Passive	.27**	.26**	.22**	.24**	.24**	.21**	.19**	.74**	.60**	.43**	.43**	.63**	.78**	.30**	.49**	1				
17. L2WTC	.28**	.30**	.27**	.23**	.18**	.23**	.22**	.51**	.50**	.34**	.50**	.36**	.46**	.30**	.48**	.30**	1			
 Meaning- focused 	.25**	.29**	.24**	.20**	.18*	.17*	.20**	.49**	.47**	.34**	.48**	.34**	.45**	.27**	.48**	.31**	.95**	1		
19. Form- focused	.27**	.27**	.28**	.22**	.16*	.28**	.21**	.43**	.43**	.28**	.44**	.33**	.38**	.28**	.38**	.23**	.88**	.69**	1	
20. FLA	.06	.03	.07	.08	.08	.05	01	.18*	.12	.09	.13	.07	.21**	.16*	.13	.19**	.09	.08	.09	1

Table 1

Correlational Analysis for the Variables

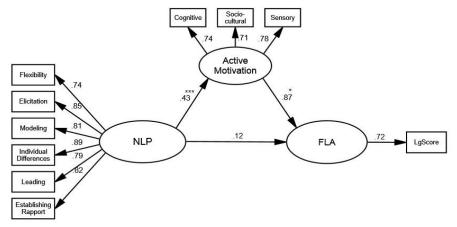
**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed)

The predictive power of the independent variables was determined via the SEM analysis. To this aim, different models were proposed (see Table 2 for the goodness of fit indices). As illustrated by Figure 4, NLP did not predict the students' foreign language achievement directly. However, mediated by active motivation, NLP was a positive predictor of foreign language achievement ($\beta = .37$, p < 0.05). Active motivation was also a positive predictor of students' foreign language achievement ($\beta = .87$, p < 0.05).

Figure 4

The Schematic Representation of the Relationships among NLP, Active Motivation, and Foreign Language Achievement



The results for the second model (Figure 5) disclosed that NLP did not predict the students' foreign language achievement directly. However, mediated by passive motivation, NLP was a positive predictor of foreign language achievement ($\beta = .38$, p < 0.01). Passive motivation was also a positive predictor of students' foreign language achievement ($\beta = .77$, p < 0.01).

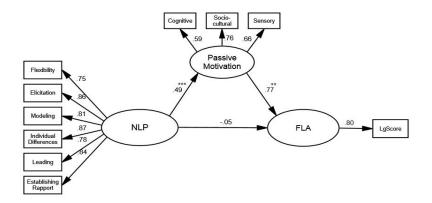
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Figure 5

The Schematic Representation of the Relationships among NLP, Passive Motivation, and Foreign Language Achievement

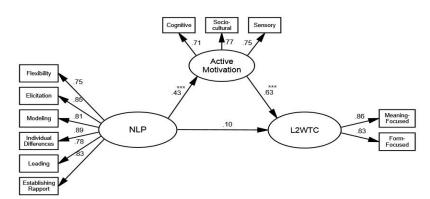


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Furthermore, the results for the third model (Figure 6) denoted that NLP did not predict the students' L2WTC directly. However, mediated by active motivation, NLP was a positive predictor of L2WTC (β = .27, p < 0.01). Active motivation was also a positive predictor of L2WTC (β = .63, p < 0.001).

Figure 6

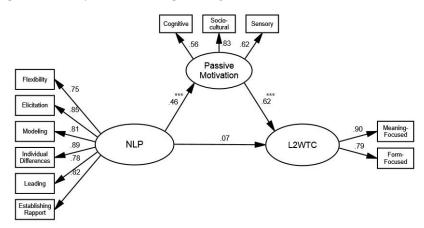
The Schematic Representation of the Relationships among NLP, Active Motivation, and L2WTC



Lastly, as Figure 7 illustrates, NLP did not predict students' L2WTC directly. However, mediated by passive motivation, NLP was a positive predictor of L2WTC ($\beta = .29$, p < 0.01). Passive motivation was also a positive predictor of L2WTC ($\beta = .62$, p < 0.001).

Figure 7

The Schematic Representation of the Relationships among NLP, Passive Motivation, and L2WTC



To see whether the models fit the data, goodness of fit indices were calculated using Amos. Table 2 shows the relative chi-square (i.e., chi-square index divided by the degrees of freedom (χ^2/df)), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Squared Error (SRMR). The criterion for acceptance is different across researchers. In the present study, values for χ^2/df should be less than 3 (Ullman, 2001), TLI and CFI were over .90, and RMSEA and SRMR were equal to or less than .08 (Browne & Cudeck, 1993).

Table 2

Models	χ²/df	df	CFI	TLI	RMSEA	SRMR
CFA (Figure 2)	1.57	305	.93	.92	.05	.05
CFA (Figure 3)	1.60	218	.93	.91	.05	.06
Model 1 (Figure 4)	1.04	31	.99	.99	.01	.03
Model 2 (Figure 5)	1.43	33	.98	.98	.05	.04
Model 3 (Figure 6)	1.57	39	.98	.97	.05	.04
Model 4 (Figure 7)	1.59	39	.98	.97	.05	.04

Goodness of Fit Indices for the Models

5. Discussion

As the world continues to become more globalized; individuals continuously strive to improve their language competency and develop their communication skills for several reasons, including personal improvement, continuing education, immigration purposes, and even obtaining new employment. Nevertheless, there are several factors that can influence communication in the target language, like motivation, which is considered to be one of the most important variables, since almost anyone motivated to master a new language can excel in practical understanding (Dörnyei, 2001).

Another factor considered in the previous literature was applying NLP techniques in language teaching, which resulted in fruitful classroom experiences (Millrood, 2004). Moreover, according to Pishghadam et al. (2011), teacher awareness and proper compliance with these techniques contributed to teacher success. However, addressing the second participant of the classroom environment, i.e., the learners, is crucial to achieving "language achievement" by modeling "excellent behavior" as a means of repetition (Revell & Norman, 1997). Despite the fact that language achievement and promoting communicative competence in the target language embody the intention of language learners (Dörnvei, 2005), they still show differences toward communicating in the target language due to psychological, linguistic, and contextual variables. Students' L2WTC as a social and cultural construct displayed a positive correlation with sensory motivation. That is, the more students' senses are involved, the more they are willing to communicate in the classroom (Makiabadi et al., 2019). Hence, empirical evaluation of the psychological aspects of NLP techniques based on learners' willingness to communicate and their sensory motivation in the classroom context needs to be conducted to determine the relationship between these two variants and the exemplary implementation of NLP techniques as well as possible prediction of each of these three variables in terms of second language proficiency. A further objective of the study was to determine whether NLP implementation would result in language achievement when mediated by sensory motivation. The final objective of this study was to investigate whether sensory motivation could be used as a mediator to predict L2WTC through the implementation of NLP techniques by teachers.

To address these concerns, this study evaluated teachers' use of NLP techniques through the newly developed NLP-Student Version scale. Furthermore, this study examined the relationship between teachers' use of NLP techniques, students' sensory motivation, their level of L2WTC, and foreign language achievement.

Cronbach's reliability estimates, in conjunction with the CFA, highlighted the psychometric properties (validity and reliability) of the NLP-Student Version scale with its six factors. Assessing the flexibility level of teachers in their classroom is crucial when it comes to testing teachers' feedback and behaviors in a classroom context, whether positive or negative, as seen in items 1-5 (Pishghadam et al., 2011).

Elicitation factor, comprising items 5-10, tests teachers' strategies in gathering information from their students through scrutinizing non-verbal signals or posing Meta Model questions, (Millrood, 2004). The factor of modeling learners by presenting new or challenging material to help them accomplish their tasks is reflected by items 10-15. The fourth factor evaluates teachers' ability to recognize learners' individual differences to ensure their sense of belonging and to engage the entire class evenly, as seen in items 15-20 of the scale. The fifth factor, expressed by items 20-25, was designed to assess teachers' skills in assisting students by leading them to bridge any gaps throughout the learning procedure and creating sufficient congruence with them, which in turn can change students' behavior and get motivated to follow their teachers. Lastly, the establishing rapport factor (items 25-30) examines teachers' ability to negotiate with learners and generate responses from them, thereby ensuring a mutually beneficial relationship between the teachers and students based on trust and understanding.

The 24-item APM scale (English version) demonstrated psychometric properties based on the results of the CFA and the reliability estimates of Cronbach's alpha. Alami's APMS (2020) was used after translating it from Persian into English since the targeted audience was Iraqi EFL learners who speak Arabic as their mother-tongue and English as their foreign language. With regard to the relationships among teachers' implementation of NLP techniques, students' willingness to communicate, their sensory motivation, and language achievement, the results showed that some variables are significantly correlated with each other. NLP (SVS) and its subconstructs demonstrate a significant correlation with APMS and its subconstructs. From a cognitive perspective, the concept of change can explain the relationship between active/passive motivation and NLP techniques, as change occurs at the unconscious level, and the unconscious mind is benevolent. Hence, NLP can facilitate this change journey from an unsatisfactory present state to the desired outcome. As described by O'Connor (2001), NLP is an art and science of personal excellence; the correlation can be attributed to the engagement and involvement of students' senses through NLP techniques and strategies for building rapport, bringing about personal change, and motivation for learning (Alami, 2011). Moreover, this relationship may be explained by the brain's primary role in controlling motor and sensory activities and thinking (active/passive sensory motivation). According to Delbio and Ilankumaran (2018), NLP focuses on psychological and neurological factors based on studies regarding brain development that demonstrate the psychological and anatomical mechanisms underlying language development proficiency. Additionally, as illustrated by the scale items, the correlation with (active/passive sociocultural motivation reflects the principles of NLP in terms of creating a better learning environment, motivating communication skills with native speakers of the language, maintaining relationships with peers, and modeling successful behaviors in order to achieve proficiency in the target language (Kudliskis & Burden, 2009). The relationship between the NLP (Student-Version) Scale and L2WTC, along with its subconstructs, meaning-focused and form-focused activities, determined that the sub-constructs of the NLP (SVS) and the sub-constructs of the L2WTC were positively related. In fact, this analysis reflects the effect of techniques like establishing rapport in decreasing the stress and anxiety among learners (Cetinkaya, 2005; Gardner & MacIntyre, 1993; Hashimoto, 2002; Yashima, 2002). Thus, teachers' implementation of NLP techniques, mediated by sensory motivation (i.e., active & passive), can predict students' L2WTC based on the fact stated by Lahuerta (2014) that language learning communication strategies directly affect motivation, self-perceived communication competence, and WTC in English. Moreover, by utilizing structural equation model (SEM), NLP indicated an indirect effect on foreign language achievement. Thus, it was a positive predictor of foreign language achievement when mediated by active motivation. The significance of this finding lies behind the vital role of motivation in foreign language learning when language learners' senses are involved. Within the same realm, NLP was found to indirectly predict foreign language achievement when mediated by passive motivation. In this regard, passive motivation can also be a significant predictor of foreign language achievement among EFL learners when they are mentally engaged and led by their teachers. In light of this prediction, NLP techniques and sensory motivation are aligned to promote foreign language achievement, as NLP assists in improving memory, promoting self-esteem, adopting effective strategies for learning, identifying impediments to reshape approaches in education, and optimizing motivation (Thornbury, 2001).

As for the prediction power of NLP on students' L2WTC, the findings from applying SEM revealed the indirect effect of NLP over students' L2WTC when mediated by active motivation. Thus, NLP, as well as the level of active motivation, positively predict L2WTC. Another finding of the fourth model was that NLP might indirectly predict students' L2WTC if mediated by passive motivation, suggesting that passive motivation is a reliable predictor of students' L2WTC. It is possible to interpret this in the context of previous research in which motivation was found to be a predictor of L2WTC (MacIntyre & Charos, 1996; MacIntyre & Clément, 1996), considering the fact that NLP techniques build rapport and congruence with students which in turn result in decreasing language anxiety (MacIntyre et al., 1997).

This study has implications for administrators to develop and design programs and to hold upgrading courses for enhancing the knowledge of language teachers. This study is also highly relevant for teachers to plan and manipulate techniques and strategies in response to the individual differences of their language learners, where everyone is unique, and to take into account their students' passive as well as their active motivation. In addition to guiding students to discover their learning objectives and interests, teachers can employ various techniques to identify students' strengths and weaknesses in different concepts and activities. As a result, educators may be better able to assess the aptitudes and aspirations of their students to learn a foreign language. The results of this study indicated, for example, that cognitive active motivation is correlated significantly with foreign language achievement, so teachers can devote more time to considering cognitive skills in their classes, such as searching for specific topics and writing about them or performing various vocabulary exercises.

A replication of the study and a qualitative approach involving multiple case studies to collect detailed information from students would, therefore, increase and reinforce the expansion of results. Furthermore, classroom observations can be used as part of the data collection to avoid dishonest or missed responses. Additionally, there is a possibility of conducting research with university students in which sensory motivation may differ since EFL learners attending private institutes tend to do so voluntarily, and the strategies used by the educators are more likely to be diverse and flexible. Therefore, a correlational study involving these two types of participants may be able to provide a thorough explanation of the results and fruitful outcomes. Lastly, since this study was conducted in Iraq provinces, it may be limited to the cultural patterns and motives of people in this region. In order to determine whether different cultures and motivations will exhibit varying results concerning this study, researchers are urged to replicate this study in other countries and probably among immigrants from different backgrounds.

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Appendix The NLP-SVS

Statements	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
1. The teacher has different teaching rates for students to learn.						
2. The teacher rarely corrects our learning errors.						Page 16
3. The teacher allows us to form groups freely.						
4. The teacher runs the class in a casual way.						
5. The teacher makes use of different teaching						
methods.						
6. The teacher asks for our opinions about the topics						
presented in class.						
7. The teacher asks us questions to clear any						
ambiguities when needed.						
8. The teacher challenges us with new types of tasks.						
9. The teacher encourages creative answers.						
10. The teacher gives feedback on our correct and						
incorrect answers.						
11. The teacher writes unclear material on the board						
for clarification.						
12. The teacher uses different types of media as a						
model when needed.						
13. The teacher always does the first exercise for us as						
an example to follow.						
14. The teacher shows us samples from previous						
learners for project assignments.						
15. The teacher reads the new words aloud for us to						
repeat.						
16. The teacher provides help for students with less						
language ability.						
17. The teacher gives us enough time to write down						
notes and do class activities.						
18. The teacher tries to create a positive feeling toward						
language learning in us.						
19. The teacher considers our opinions as students.						
20. The teacher uses different ways of clarification						
when we do not understand something.						
21. The teacher usually provides us with the words						
needed for a conversation.						
22. The teacher writes the required grammar on the						
board for holding a dialogue.						
23. The teacher asks us to take notes for better						
learning and understanding.						
24. The teacher tells us how to study.						
25. The teacher has a syllabus for the class.						
26. The teacher shows interest in the topics we						
present.						
27. The teacher shows a respectful attitude toward						
each of us.						
28. The teacher rewards our participation with verbal						
praise. 29. The teacher shows interest in our hobbies and						
ambitions.		-				
30. The teacher is accessible online to provide support to students.						
to students.						l