Research Article

Integrating Neuro-Linguistic Programming And Multiple Intelligences In Language Learning: A Bridge Between Theory And Practice

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ARTICLE INFO	ABSTRACT
	This research delves into the benefits of combining Neuro Linguistic Programming (NLP) and Multiple Intelligences (MI) in language learning. NLP utilizes language, behavior and strategic thinking to improve communication and learning while MI theory identifies eight types of intelligence fostered by tailored learning environments. The study extensively reviews existing literature, on NLP and MI focusing on the possibilities and obstacles of integrating them into language education. It demonstrates how the fusion of NLP and MI can establish learning settings that cater to learning preferences. This research contributes to the field of language learning by connecting theory with applications. Through the use of SPSS software for data analysis it examines hypotheses, investigates relationships between variables. The results indicate that incorporating NLP and MI in language learning shows potential for addressing differences and preferences ultimately improving outcomes, for learners and educators in a language learning setting. **Keywords:** Neuro-Linguistic Programming (NLP), Multiple Intelligences (MI), Language Learning, Theory and Practice, Personalized Learning, Educational Strategies **Themes:** Inclusive Education, Educational Psychology and Learning Styles

1. Introduction

The combination of Neuro Linguistic Programming (NLP) and Multiple Intelligences (MI), in the field of English language learning has gained attention and importance. This study aims to investigate the advantages of integrating these two approaches and bridging the gap between theory and practice in English as a language education.

1.1 Neuro-Linguistic Programming (NLP): A Brief Sketch
Neuro linguistic programming (NLP) is an approach that involves studying the tactics utilized by individuals and applying them to achieve personal goals. Richard Bandler and John Grinder developed NLP in the 1970s. NLP delves into the connections, between our thoughts (neuro) our communication (linguistic) and patterns of behaviour and emotions (programming).
In relation to learning English NLP techniques have been employed to enhance communication skills accelerate language acquisition and boost self-assurance. NLP can be used to comprehend and modify thought patterns, language usage and behaviours that may impact success in language learning.
The growth of NLP in English language learning can be attributed to its focus on communication and its potential to address barriers that may hinder acquiring a new language. Some educators and learners have found NLP techniques advantageous when it comes to building rapport overcoming language anxiety and developing motivated attitudes towards learning a new language.
It is worth noting that although NLP has gained popularity in circles as well as self-help domains there is on-going debate, among psychologists and researchers regarding its scientific validity and effectiveness. Like any

approach peoples experiences with NLP may vary so it's important to approach its use in language learning with a mind and a critical perspective.

1.2 Multiple Intelligence: An Overview

Multiple Intelligence is a theory that suggests human intelligence is not a single unified entity but rather a combination of various intelligences. These intelligences are somewhat independent, from each other and it can be developed through experience and education.

In the context of learning English, Multiple Intelligence theory proposes that there are ways individuals can learn and process language. Some individuals may excel in learning while others may prefer kinesthetic methods. By recognizing the intelligences involved in language learning educators can tailor their teaching approaches to suit each student's needs.

There are models of Multiple Intelligence. One of the most well-known theories is Howard Gardner's eight intelligences. These intelligences include;

1. Linguistic intelligence: the ability to comprehend and use language effectively.
2. Logical mathematical intelligence: the ability to reason, analyse and solve problems.
3. Spatial intelligence refers to the capability of perceiving and manipulating relationships effectively.
4. Bodily kinaesthetic intelligence involves controlling body movements and utilizing them in a skilful manner.
5. Musical intelligence encompasses the ability to create and appreciate music.
6. Interpersonal intelligence relates to understanding and effectively interacting with others.
7. Intrapersonal intelligence involves comprehending oneself and one's own emotions.
8. Naturalist intelligence pertains to understanding and engaging with the world.

The theory of Multiple Intelligences has had an impact, on the field of education. It has led to the development of teaching methods that cater to learning styles. By recognizing these intelligences involved in language learning educators can assist students in reaching their potential.

1.3 An integration of Neuro-Linguistic Programming (NLP) & Multiple Intelligence

By integrating NLP and MI, the Neuro Linguistic Programming (NLP) VAKOG model and the Multiple Intelligences (MI) theory are two frameworks that can help us understand and cater to the learning preferences and strengths of individuals when it comes to English as an second language. VAKOG stands for Visual, Auditory, Kinesthetic, Olfactory and Gustatory representing the ways people perceive and communicate with the world (Bandler & Grinder 1979; O'Connor & Seymour 1990). On the hand MI proposes eight types of intelligence that individuals possess in varying degrees, including logical mathematical, spatial, musical, bodily kinaesthetic, interpersonal, intrapersonal and naturalist intelligences (Gardner 1983; 1999).

By combining both VAKOG and MI approaches, in teaching English language learners or teachers can identify a learner's modality and intelligence type. This understanding allows them to employ strategies and methods that facilitate learning. For example if a learner is predominantly spatial oriented they may find it beneficial to use aids such as images graphs maps or videos to grasp new concepts and skills. Alternatively a musical learner may prefer listening to podcasts songs or dialogues when acquiring vocabulary or grammar.

Individuals, with a preference for bodily kinesthetic learning may find joy in utilizing gestures, movements and role plays to grasp expressions and situations. Those who lean towards olfactory and naturalist learning might associate smells. Tastes with words and phrases to gain insights into cultures and cuisines. Similarly individuals inclined towards gustatory and interpersonal learning may choose to share food and drinks with others as a means to acquire languages and social skills (Smith, 2008).

The integration of VAKOG (Visual, Auditory, Kinesthetic, Olfactory, and Gustatory) modalities along with MI (Multiple Intelligences) can also assist learners in developing their areas while utilizing their ones. For instance if someone lacks logical mathematical skills they can enhance them by listening to explanations or engaging in puzzles and quizzes. They can also employ numerical mnemonics as aids for retaining information. Similarly someone lacking proficiency in linguistic skills can improve through reading books, magazines, comics while employing verbal imagery techniques for better recall (Smith, 2008).

The integration of VAKOG modalities along with MI serves as a tool for educators and learners alike, in enhancing the quality and effectiveness of the learning process. However it is crucial not to view this integration as a deterministic framework; instead it should be seen as a guide that can be adapted according to various contexts, objectives and individual preferences.

It is important to exercise caution and engage in thinking when using it. It should not be seen as a replacement, for founded principles and practices (Smith, 2008).

2. Statement of problem:

English language learning and teaching is always a challenge for teachers and students. With change of time pedagogy has been updated by various experts in the same field. Teaching and imparting the understanding of English language has become a tedious task for language teachers of Cuttack and Bhubaneswar in Odisha, India. The teachers and students do not know the theory and application of NLP and MI in the field of

education and especially in English language learning for Gen. Z students. In recent days, with barriers and restrictions, ESL learners and teachers face many challenges such as:

- There is a decline in interest and motivation among students of Generation Z in learning English, especially in Odisha, Bhubaneswar & Cuttack.
- There is a misconception among students that they are already proficient in English and that language learning is not important for their career development.
- There are various linguistic and cultural factors that influence the students' English language acquisition, such as multilingualism, multiculturalism, and native culture and language.

3. Literature Review:

Dolati and Tahriri (2017) This study examine how the intelligence types dominates of English as a Foreign Language (EFL) teachers relate to the activities they use in their classrooms. The researchers also investigate the teachers' perspectives on multiple intelligences theory. To gather data they employ a mixed methods approach, including observation interviews and an intelligence survey. The sample consists of 30 EFL teachers who all teach from the textbook using the same teaching method. The findings indicate that only teachers with intelligence tend to utilize activities that align with their dominant intelligence type. Other intelligence types do not seem to influence classroom practices for these teachers. Furthermore the study suggests that while most teachers possess a view of multiple intelligences theory they lack knowledge and training in applying it effectively in their instruction. This research contributes insights into the relationship between multiple intelligences theory and its implications for EFL teaching. Additionally it offers suggestions, for research and teacher education in this area.

Farahani, F. (2024) In this study the focus is on how NLP techniques impact the reading comprehension of EFL learners in an ESP course. The research employs ANCOVA to compare the performance of 60 students in Iran. These students are divided into two groups; a group that receives NLP instruction and a control group that follows the ESP reading approach. The findings reveal that the experimental group demonstrates reading comprehension skills compared to the control group. This suggests that incorporating NLP techniques can enhance EFL learner's abilities when it comes to reading in ESP courses. The paper is well written and effectively presents evidence supporting the effectiveness of NLP techniques in ESP reading. However there are areas for improvement in this paper. These include expanding the sample size implementing randomization techniques extending the duration of treatment considering factors that influence reading comprehension providing details regarding how NLP was implemented and discussing the implications of using NLP techniques on reading comprehension. Overall this research highlights how utilizing NLP techniques can positively impact EFL learners reading skills in ESP courses while also suggesting areas, for exploration and improvement.

Arulselvi, E. (2018). In this paper explores the theory of Multiple intelligences (MI) proposed by Howard Gardner and its implications, for teaching English. The author gives an overview of the eight types of intelligences and Gardner's identification of five minds for the future. Various activities and tasks are suggested to accommodate learning styles and preferences among language learners. The paper highlights the significance of students recognizing their strengths and weaknesses well as creating a learner cantered and authentic learning environment. It is an organized and informative paper that offers examples and resources to teachers interested in incorporating MI theory into their classrooms. However it could benefit from evidence supporting the effectiveness of MI based instruction as well as addressing challenges and limitations, in implementing MI theory across different contexts.

Rayati, M. (2021). In this study the author explores the use of neuro linguistic programming (NLP) techniques, in English language teaching (ELT) in Iran. The author conducted a 16 hour NLP training workshop for a group of 20 EFL teachers, observed their teaching practices both before and after the workshop. Additionally interviews were conducted with these teachers to gain insights into their perceptions of NLP and its impact on their teaching methodologies. The findings revealed that the majority of teachers incorporated NLP techniques to varying extents in their classes resulting in outcomes such as improved rapport with students, flexibility, increased motivation and stimulated critical thinking skills. This paper offers suggestions for EFL teachers, teacher educators and researchers interested in exploring the implications of NLP for ELT. The paper is well written and well-structured making a contribution to existing literature on NLP and ELT within EFL contexts. However it is worth noting that there are limitations that could be further addressed in research endeavors. These include factors like the sample size used in this study the convenience sampling method employed for participant selection incomplete learner perspectives evaluation as well as the absence of a control group, for comparison purposes.

Zhang, X. et al. (2023). This research paper explores how neuro linguistic programming (NLP) impacts the achievements, emotional intelligence (EI) and critical thinking abilities of advanced learners studying English as a foreign language. The study followed a design conducting pre-tests and post-tests to compare the progress of 50 learners who received NLP training, with a control group. The findings indicated that NLP had an influence on all three variables suggesting that it can be a valuable technique for enhancing learning outcomes and personal growth. The paper includes an in depth review of existing literature, an explanation of the intervention method employed and a clear presentation of the data analysis. However there are some

areas for improvement within the paper such as addressing limitations like the homogenous sample size, lack of follow up assessments and potential factors that could impact motivation and self-regulation. Overall this research contributes to the field of NLP and education by offering evidence supporting the effectiveness of NLP strategies, in improving both abilities and emotional skills among learners.

Octaberlina, L. R., & Asrifan, A. (2021). In this paper the concept of multiple intelligences and its impact, on learning in schools is explored. The authors provide an overview of Howard Gardner's eight proposed types of intelligence. Discuss how they can be practically applied, developed and evaluated in the classroom. Additionally the paper offers examples of learning activities that cater to types of intelligence emphasizing the importance for educators to acknowledge and appreciate their student's unique strengths and potentials. With its written and informative content this paper offers insights on how to enhance learning outcomes and experiences for elementary school students. However it would benefit from evidence and research findings to support the claims and recommendations put forth by the authors. Furthermore a clear conclusion summarizing the points and implications of the paper would strengthen its impact. All this contribution enriches existing literature, on multiple intelligences and education.

Arnold, J., & Fonseca, M. C. (2004). In this research paper we delve into the implications of Gardner's theory of Multiple Intelligences Theory (MIT), on the learning and teaching of languages. The authors argue that MIT offers a perspective that acknowledges and supports the range of learners providing various methods to engage with meaning and memory. The paper examines the elements of MIT and how it relates to learning styles, motivation, evaluating stimuli, language aptitude, personal relevance and memory. It also suggests ways in which different intelligences can be utilized as frameworks, for language instruction by presenting examples of activities that cater to musical visual spatial logical mathematical bodily kinesthetic, interpersonal, intrapersonal and naturalist intelligences. Ultimately the paper concludes that MIT not enhances communicative skills but also fosters personal growth and social development within language classrooms.

Nicholson-Nelson, K. (1998). In this book offers an exploration of how to develop students multiple intelligences (MI) within the classroom. As a teacher she shares insights and practical strategies, for implementing MI across different subjects and grade levels. The book is filled with engaging examples of student projects, assessment tools and classroom activities that effectively incorporate MI principles. Nicholson Nelson's enthusiasm and expertise in MI shine through the organized and informative content. It's worth noting that her book, "Developing Students Multiple Intelligences" serves as a resource for teachers aiming to enhance their students learning and motivation. However it would be beneficial if the book included references to support the author's claims and arguments. For instance citing research studies and literature reviews that explore the effectiveness and challenges of MI in education would strengthen the credibility of the book. Additionally addressing criticisms surrounding MI theory—such as a lack of evidence or difficulties in measuring and assessing MI—along with concerns about stereotyping or labeling based on students MI profiles would provide a more balanced perspective on its implications, for teaching and learning.

Tahiri, Z. (2023). In this research paper we delve into Howard Gardner's theory of Multiple Intelligences (MI) and its implications, for English as a language (EFL) classrooms in Kosovo. The study employed a combination of questionnaires and classroom observations to examine how familiar EFL teachers were with MI theory how they implemented it in their teaching and the correlation between the theory and their teaching strategies. The findings indicated that while most EFL teachers had an understanding of MI theory they struggled to apply it in their classrooms. Furthermore the study revealed that the majority of teachers possessed intelligence profiles and predominantly relied on teacher cantered and behaviorist teaching methods. To address this issue the author proposed that EFL teachers should adopt a student cantered approach that caters to the needs and abilities of learners. Overall this paper offers an overview of MI theory's relevance in EFL teaching and learning contexts. However certain limitations need attention, such as the sample size, absence of a control group and potential bias in self-reported data. Additionally further analysis is warranted concerning classroom observations and exploring connections between teachers' intelligence profiles and their chosen teaching strategies. It would also be beneficial to provide recommendations along, with examples showcasing how MI theory can be integrated effectively into EFL classrooms.

Massanet Oliver, A. (2017). In this thesis the author delves into the significance of motivation and multiple intelligences, in English as a Foreign Language (EFL) classroom drawing on Howard Gardner's theory of intelligences. The author presents a unit and a project that aim to engage students with various learning styles and abilities through different types of activities. Additionally the author conducts a survey among bachillerato students to examine their motivation levels and understand their intelligences. The thesis includes a literature review on intelligence, motivation and multiple intelligences along with examples of their application in an EFL context. It is well organized, clear and informative while offering insights, for EFL teachers and learners. However further empirical evidence could strengthen the effectiveness of the proposed unit and project. Moreover it would be beneficial to discuss the challenges and limitations associated with implementing the intelligences approach in classrooms. In addition conducting an analysis of both survey results and student feedback would enhance the quality of this thesis.

4. Research questions:

I. How can the combination of Neuro Linguistic Programming (NLP) and Multiple Intelligences (MI) improve the process of learning English as a language?
II. What are the benefits and difficulties that arise when integrating NLP and MI, in language education?
III. In what ways can utilize both NLP and MI help connect theory with application in language learning?
IV. How might the integration of NLP and MI impact learning styles and abilities, in language education?

5. Research objectives:

I. To explore the advantages of combining Neuro Linguistic Programming (NLP) with Multiple Intelligences (MI) in language learning.
II. To review the body of literature on NLP and MI focusing on the potential and difficulties of integrating them into language education.
III. To showcase how harnessing the power of NLP and MI can create learning environments that cater to learning styles and abilities.
IV. To bridge the gap, between theory and practice, in language learning by integrating NLP and MI.

6. Theoretical framework

The theoretical framework primarily relies on the neuro theory, which focuses on how information's processed through visual, auditory and kinesthetic modes (VAK). This researches theoretical foundation involves comprehending the principles and applications of Neuro Linguistic Programming (NLP) and Multiple Intelligences (MI) in the context of language acquisition for English as a language. It encompasses exploring NLPs approach, to enhancing communication, behavior and strategic thinking along with Gardner's theory of intelligences and its implications, for language learning.

7. Research Method and Design

The research used SPSS software to analyses the data, which allowed them to test hypotheses and explore relationships, between variables. A mixed methods approach which involved observing, interviewing and surveying participants as conducting ANCOVA analysis. Additionally the administered questionnaires and observed classrooms to gauge the motivation levels of bachillerato students and gain insights into their intelligences. A combination of questionnaires and classroom observations to assess how familiar EFL teachers are with MI theory how they incorporated it into their teaching practices and whether there is a correlation, between the theory and their teaching strategies.

8. Results and Discussion

The frequency table, **Table 1** provides a breakdown of the number and percentage of cases, for each value. For example let's take a look at the Freq_Intel. We have 2 cases (6.3%) with a value of 1, 1 case (3.1%) with a value of 2 and so on. The cumulative percent helps us understand the percentage of cases with a value to or less than the value. For instance when it comes to Freq_Intel we find that 6.3% of cases have a value less than or equal to 1 while 9.4% have a value than or equal to 2.
The distribution of each variable and compare the frequencies and percentages across the values. It's also worth looking for any patterns, trends, outliers or anomalies in the data that may catch your attention. Here are some examples;
 The majority of cases show a frequency (value = 4) when it comes to activities (Freq_Intel). Few cases have a low frequency (value = 2).
 Cooperative or individual learning methods (Pref_Method) tend to be preferred by cases with values of either 4 or 5, as their common choices. On the hand competitive methods are preferred by very few cases with a value of 3.
Keep these points in mind while interpreting the table and exploring its implications.
The majority of people tend to have a level of enjoyment (usually rated as 5) when it comes to engaging in activities. However there are a few cases where individuals express a level of enjoyment (rated as 3). This pattern can be observed across variables well.

Table -1

Frequencies

Statistics

		Freq_Intel	Pref_Method	Enjoy_Creat	Comp_Recall	React_Obs	Motiv_Conf	Goal_Monit	Freq_Refl	Benefit_Coop	Respect_Div
N	Valid	32	32	32	32	32	32	32	32	32	32
	Missing	0	0	0	0	0	0	0	0	0	0

Frequency Table

Freq_Intel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	6.3	6.3	6.3
	2	1	3.1	3.1	9.4
	3	4	12.5	12.5	21.9
	4	22	68.8	68.8	90.6
	5	3	9.4	9.4	100.0
	Total	32	100.0	100.0	

Pref_Method

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	3.1	3.1	3.1
	4	16	50.0	50.0	53.1
	5	15	46.9	46.9	100.0
	Total	32	100.0	100.0	

Enjoy_Creat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	4	12.5	12.5	12.5
	4	12	37.5	37.5	50.0
	5	16	50.0	50.0	100.0
	Total	32	100.0	100.0	

Comp_Recall

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	3.1	3.1	3.1
	2	1	3.1	3.1	6.3
	3	7	21.9	21.9	28.1
	4	13	40.6	40.6	68.8
	5	10	31.3	31.3	100.0
	Total	32	100.0	100.0	

React_Obs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	3.1	3.1	3.1
	3	6	18.8	18.8	21.9
	4	10	31.3	31.3	53.1
	5	15	46.9	46.9	100.0
	Total	32	100.0	100.0	

Motiv_Conf

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	6	18.8	18.8	18.8
	5	26	81.3	81.3	100.0
	Total	32	100.0	100.0	

Goal_Monit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	3.1	3.1	3.1
	2	2	6.3	6.3	9.4
	3	6	18.8	18.8	28.1
	4	16	50.0	50.0	78.1
	5	7	21.9	21.9	100.0
	Total	32	100.0	100.0	

Freq_Refl

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	3.1	3.1	3.1
	2	3	9.4	9.4	12.5
	3	8	25.0	25.0	37.5
	4	15	46.9	46.9	84.4
	5	5	15.6	15.6	100.0
	Total	32	100.0	100.0	

Benefit_Coop

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	6.3	6.3	6.3
	3	6	18.8	18.8	25.0
	4	14	43.8	43.8	68.8
	5	10	31.3	31.3	100.0
	Total	32	100.0	100.0	

Respect_Div

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	6.3	6.3	6.3
	3	3	9.4	9.4	15.6
	4	12	37.5	37.5	53.1
	5	15	46.9	46.9	100.0
	Total	32	100.0	100.0	

The first analysis, called "**Table -2** " involved comparing the frequency of intelligence related activities, between males and females using an independent samples t test. The results indicated that there was no difference in how males and females engaged in these activities. In words both genders showed levels of involvement. The observed difference between the groups was not very large falling within a to medium effect size range.

Next in the analysis we conducted a paired samples t test to compare three sets of variables; enjoyment of activities and comprehension recall reaction to observation and preferred method of learning and age and goal monitoring. The findings revealed that there was a distinction between enjoyment of activities and comprehension recall. This suggests that participants who reported levels of enjoyment in activities also displayed better comprehension recall scores. This difference was considered substantial as it yielded an effect size.

However no significant distinction emerged between reaction to observation and preferred method of learning. In terms participants who reacted strongly to observations did not display a preference for specific learning methods, over others. The observed difference fell under the small effect size category indicating that it was relatively insignificant.

Lastly there was a difference when comparing age and goal monitoring scores. Older participants tended to have goal monitoring scores compared to their counterparts.
The magnitude of the effect was substantial suggesting that the difference was significant.

Table-2

T-Test

Group Statistics

Gender	N	Mean	Std. Deviation	Std. Error Mean
Freq_Intel Male	13	3.92	.641	.178
Female	19	3.58	1.071	.246

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
					Significance					
					One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference		
	F	Sig.	t	df					Lower	Upper
Freq_Intel Equal variances assumed	4.408	.044	1.036	30	.154	.309	.344	.332	-.334	1.023
Equal variances not assumed			1.135	29.606	.133	.265	.344	.303	-.275	.964

Independent Samples Effect Sizes

		Standardizer^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Freq_Intel	Cohen's d	.923	.373	-.342	1.082
	Hedges' correction	.947	.363	-.333	1.054
	Glass's delta	1.071	.321	-.396	1.030

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control group.

T-Tes

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Enjoy_Creat	4.38	32	.707	.125
	Comp_Recall	3.94	32	.982	.174
Pair 2	React_Obs	4.22	32	.870	.154
	Pref_Method	4.44	32	.564	.100
Pair 3	Age	16.66	32	.545	.096
	Goal_Monit	3.81	32	.965	.171

Paired Samples Correlations

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	Enjoy_Creat & Comp_Recall	32	.081	.329	.658
Pair 2	React_Obs & Pref_Method	32	.193	.145	.290
Pair 3	Age & Goal_Monit	32	-.372	.018	.036

Paired Samples Test

		Paired Differences								Significance	
				Std. Error Mean	95% Confidence Interval of the Difference					One-Sided p	Two-Sided p
		Mean	Std. Deviation		Lower	Upper	t	df			
Pair 1	Enjoy_Creat - Comp_Recall	.438	1.162	.205	.018	.857	2.129	31	.021	.041
Pair 2	React_Obs - Pref_Method	-.219	.941	.166	-.558	.121	-1.315	31	.099	.198
Pair 3	Age - Goal_Monit	12.844	1.273	.225	12.385	13.303	57.084	31	<.001	<.001

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	Enjoy_Creat - Comp_Recall	Cohen's d	1.162	.376	.015	.732
		Hedges' correction	1.191	.367	.014	.715
Pair 2	React_Obs - Pref_Method	Cohen's d	.941	-.232	-.582	.121
		Hedges' correction	.965	-.227	-.568	.118
Pair 3	Age - Goal_Monit	Cohen's d	1.273	10.091	7.565	12.610
		Hedges' correction	1.305	9.845	7.380	12.302

a.The denominator used in estimating the effect sizes. Cohen's d uses the sample standard deviation of the mean difference. Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor. The first table, **Table 3** presents the connection, between gender and preferred learning methods. The findings indicate that there is no preference for a method among males or females. Both genders exhibit proportions of auditory learners. However females have a likelihood of being kinesthetic learners compared to males (47.4% vs 30.8%).

The second table demonstrates the relationship between class and preferred learning methods. The results reveal a disparity in preferences across the three classes. Class 1 has the proportion of learners (50%) whereas class 2 has the lowest (16.7%). Class 3 possesses the proportion of learners (58.3%) while class 1 has the lowest (25%). Additionally class 2 displays the percentage of learners (66.7%), with class 3 having the lowest percentage (16.7%). These outcomes imply that different classes may exhibit learning styles and requirements.
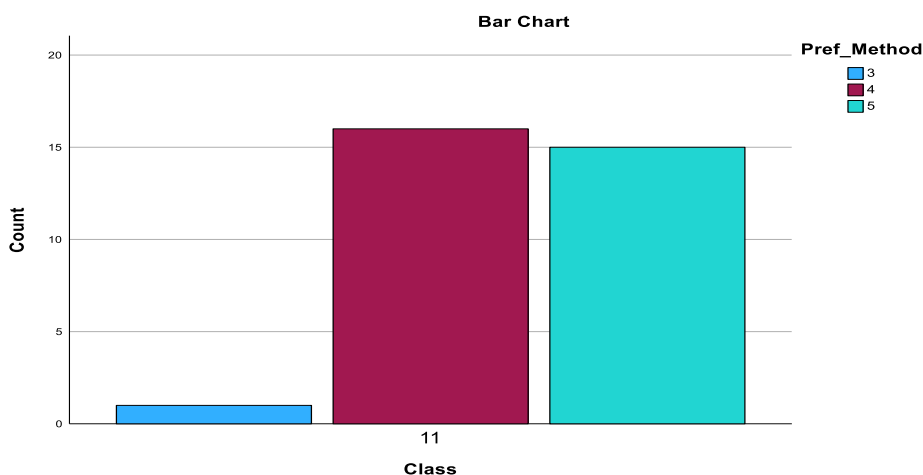
Table- 3

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Pref_Method	32	100.0%	0	0.0%	32	100.0%
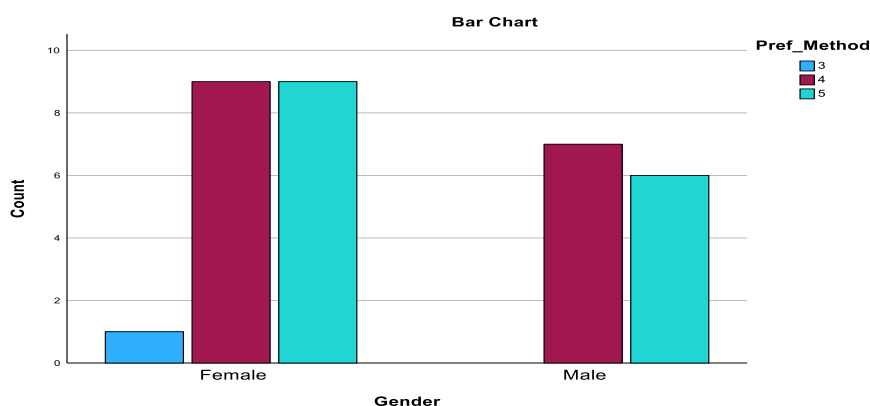
Bar Chart

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Class * Pref_Method	32	100.0%	0	0.0%	32	100.0%

Bar Chart

The results of the regression analysis (**Table 4**) display the outcomes of fitting a model to forecast the Comp_Recall (composite recall score) by utilizing five predictor variables; Freq_Intel (frequency of engaging in intellectual activities) Pref_Method (preference, for learning methods) Enjoy_Creat (enjoyment of creative activities) React_Obs (reaction to observations) and Motiv_Conf (motivation and confidence). The model accounts for 37% of the variability in Comp_Recall, which is considered an amount. Furthermore the model exhibits significance at the 0.05 level indicating that it is unlikely to have occurred. Among these predictor variables only Freq_Intel has an impact on Comp_Recall with a coefficient of 0.443. This implies that with every one unit increase in Freq_Intel we can expect Comp_Recall to increase by 0.443 units while keeping variables constant. On the hand the remaining four predictor variables demonstrate effects on Comp_Recall as their coefficients are close to zero. Lastly it is worth noting that the constant term value of 0.977 represents the predicted Comp_Recall value when all predictor variables are set to zero; however its relevance, within this context is limited.

Table-4

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Motiv_Conf, Enjoy_Creat, Pref_Method, Freq_Intel, React_Obs[b]	.	Enter

a. Dependent Variable: Comp_Recall
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.609[a]	.371	.250	.850

a. Predictors: (Constant), Motiv_Conf, Enjoy_Creat, Pref_Method, Freq_Intel, React_Obs

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.072	5	2.214	3.062	.026[b]
	Residual	18.803	26	.723		
	Total	29.875	31			

a. Dependent Variable: Comp_Recall
b. Predictors: (Constant), Motiv_Conf, Enjoy_Creat, Pref_Method, Freq_Intel, React_Obs

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.977	2.350		.416	.681
	Freq_Intel	.443	.187	.417	2.373	.025
	Pref_Method	.337	.279	.194	1.208	.238
	Enjoy_Creat	-.023	.224	-.017	-.103	.919
	React_Obs	.309	.206	.274	1.503	.145

Motiv_Conf	-.288	.429	-.116	-.672	.508

The analysis, in **Table 5** factor analysis on 12 variables using the principal component method without rotation. From this analysis three components were extracted, explaining 61.3% of the variance in the data. The first component showed relationships with all variables except Pref_Method, Enjoy_Creat and Benefit_Coop which suggests it represents a general factor related to performance or competence. The second component had associations with Pref_Method, Motiv_Conf, Goal_Monit and Freq_Refl indicating it captures a factor connected to self-regulation or metacognition. Lastly the third component had connections with Enjoy_Creat, Goal_Monit and Respect_Div implying it reflects a factor relating to creativity or diversity. The communalities ranged from 0.429 to 0.744; this indicates that some variables are better represented by the components, than others. The scree plot clearly shows a break after the third component was extracted and supports our decision to choose three components.

Table- 5

Factor Analysis

Communalities

	Initial	Extraction
Freq_Intel	1.000	.739
Pref_Method	1.000	.429
Enjoy_Creat	1.000	.522
Comp_Recall	1.000	.546
React_Obs	1.000	.663
Motiv_Conf	1.000	.586
Goal_Monit	1.000	.744
Freq_Refl	1.000	.604
Benefit_Coop	1.000	.663
Respect_Div	1.000	.632

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.996	29.959	29.959	2.996	29.959	29.959
2	1.678	16.777	46.736	1.678	16.777	46.736
3	1.455	14.550	61.286	1.455	14.550	61.286
4	.960	9.602	70.888			
5	.806	8.063	78.951			
6	.629	6.290	85.241			
7	.578	5.784	91.025			
8	.398	3.984	95.009			
9	.290	2.895	97.904			
10	.210	2.096	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
Freq_Intel	.802	-.303	-.056
Pref_Method	.416	.452	.227
Enjoy_Creat	.309	-.249	.604
Comp_Recall	.669	-.228	-.217
React_Obs	.580	.008	-.571
Motiv_Conf	.445	.382	-.493
Goal_Monit	.323	.632	.490
Freq_Refl	.385	.668	-.096
Benefit_Coop	.615	-.523	.104
Respect_Div	.686	-.043	.399

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

The cluster analysis, in Table 6 employed the linkage method. Squared Euclidean distance measure to group 32 cases based on 10 variables associated with learning styles. The results yielded a tree diagram that illustrates the similarities between the cases and clusters. Based on the analysis it appears that there are three clusters with sub clusters within them.

The first cluster comprises cases 1, 2 3 4 6 10, 11 12,13,14,15,16,17,18,19,20 21,23,24,25,26,27,28,29 30 and32. This particular cluster exhibits a coefficient of 15.778 which indicates similarity among these cases. On the hand the second cluster encompasses cases5,7,8 and9.This cluster demonstrates a coefficient of 24.655 indicating relatively lower similarity among these cases. Lastly the third cluster solely consists of case22 which is considered an outlier due to its coefficient of47.355.This implies that case22 has very little similarity, with any other case. By utilizing cluster analysis techniques it becomes possible to identify learning styles among these cases and subsequently customizes interventions accordingly.

Table- 6

Cluster

Case Processing Summary[a,b]

| Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
32	100.0	0	.0	32	100.0

a. Squared Euclidean Distance used
b. Average Linkage (Between Groups)

Average Linkage (Between Groups)

Agglomeration Schedule

Stage	Cluster Combined Cluster 1	Cluster 2	Coefficients	Stage Cluster First Appears Cluster 1	Cluster 2	Next Stage
1	18	30	2.000	0	0	9
2	9	29	3.000	0	0	8
3	4	28	3.000	0	0	21
4	20	27	3.000	0	0	10
5	21	23	3.000	0	0	7
6	2	5	3.000	0	0	11
7	17	21	3.500	0	5	11
8	9	19	3.500	2	0	15
9	16	18	4.000	0	1	18
10	20	24	4.500	4	0	12
11	2	17	4.500	6	7	13
12	11	20	4.667	0	10	17
13	2	15	4.800	11	0	19
14	13	31	5.000	0	0	16
15	9	25	5.333	8	0	19
16	12	13	5.500	0	14	23
17	10	11	5.500	0	12	21
18	3	16	6.000	0	9	20
19	2	9	6.250	13	15	20
20	2	3	6.750	19	18	23
21	4	10	7.100	3	17	22
22	4	6	8.857	21	0	24
23	2	12	9.286	20	16	24
24	2	4	10.426	23	22	26
25	22	26	12.000	0	0	26
26	2	22	15.000	24	25	27
27	2	14	15.778	26	0	28
28	2	8	17.714	27	0	29
29	2	7	24.655	28	0	30
30	2	32	28.700	29	0	31
31	1	2	47.355	0	30	0

Case
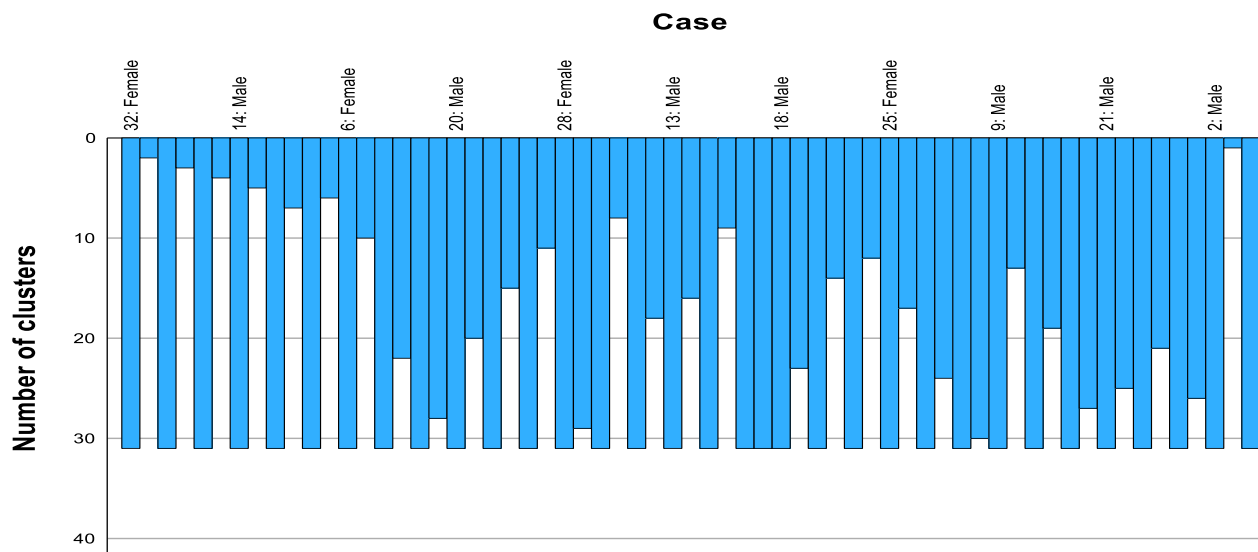
.9. Conclusion and Recommendations

Conclusion:

The research highlights the advantages of combining Neuro Linguistic Programming (NLP) and Multiple Intelligences (MI) in language learning. By integrating these two approaches we can create learning environments that cater to learning styles and abilities. The study employed SPSS software, for data analysis allowing for hypothesis testing and exploration of relationships between variables. The results indicate that incorporating NLP and MI into language learning holds promise for addressing differences and preferences during the learning process while also improving outcomes for both learners and educators. Ultimately this study suggests that integrating NLP and MI can contribute to an English language learning environment.

Recommendations:

Based on the findings it is recommended that educators consider integrating NLP and MI principles into their language teaching practices. This integration can help establish learning experiences that accommodate individual learning styles and preferences. Moreover educators should be mindful of the intelligences and modalities among their students adapting their teaching methods accordingly. Additionally further research is encouraged to explore the application of NLP and MI, in language education. It would also be beneficial to develop training programs for educators to effectively utilize these approaches in their teaching.

The combination of NLP and MI holds promise in connecting aspects with applications, in language learning thereby creating a more inclusive and efficient learning atmosphere for students with different learning preferences and capabilities.

These findings and suggestions stem from an analysis of existing literature, on NLP and MI emphasizing the opportunities and obstacles linked to incorporating them into language education.

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