# INVESTIGATE THE EXTENT TO WHICH LINGUISTIC INTELLIGENCE INFLUENCES THE DEVELOPMENT OF PROFICIENCY IN THE ENGLISH LANGUAGE AMONG TERTIARY LEVEL STUDENTS OF DISTRICT KHAIRPUR

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## ABSTRACT

This research study aimed to measure the extent to which linguistic Intelligence plays its role in learning English as a foreign language. For this purpose, related literature was reviewed to verify or confirm the thought. Tertiary-level students of district Khairpur were the population for the present research study. A mixed approach was followed to solve the query, using a multi-stage random sampling procedure; thirty-two male and female participants were selected from the defined population using simple random sampling techniques. Descriptive and inferential statistics were used to analyze the quantitative data, while thematic analysis techniques were used to analyze qualitative data. The analysis shows that linguistic Intelligence strongly and positively impacts learning English as a foreign language because the participants whose linguistic Intelligence was dominant in the Multiple Intelligence standardized tests scored high in pre and post-English proficiency tests.

**Keywords**: Linguistic Intelligence; Proficiency in English Language and Tertiary-level students

## INTRODUCTION

### Background of the Study

The value of learning English as a second language cannot be exaggerated in the current globalized world. The value of English proficiency may be seen in many aspects of life, such as education, employment prospects, communication, and cross-cultural interactions. According to Smith (2018), English is the main language used for international communication because most internet content is in English; those fluent can access a huge amount of information and resources online. Jones (2017) argues that learning English improves one's employment prospects because most international corporations and organizations use English as their official business language and demand that their staff members are fluent in it. English is the primary language of instruction at many renowned universities worldwide. A world-class education, for instance, can be accessed by studying in English-speaking nations like the United States or the United Kingdom (Brown, 2019). Most scientific and technological developments are reported in English-language publications (Chen, 2016).

However, learning a foreign language is a challenging but rewarding experience that requires a range of cognitive abilities. The theory of multiple intelligences, proposed by Howard Gardner in 1983, suggests that individuals possess a variety of bits of Intelligence that can be tapped into to enhance their learning and problem-solving skills. These bits of Intelligence include linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal Intelligence. While previous studies have examined the relationship between multiple intelligences and language learning, few have explored this in the context of English as a foreign language (EFL) acquisition in tertiary-level students.

By emphasizing the relevance of cognitive elements in language acquisition, this research adds to the body of knowledge and offers suggestions for improving teaching methods. It also emphasizes the significance of considering cognition diversity in the classroom.

### Research Objective

The general objective of this research study was :

- To determine which types of multiple intelligences (e.g., linguistic, logical-mathematical, spatial, etc.) are most strongly associated with successful language acquisition.

### Research Question

The question that made the researcher conduct this research is as follows:

- Which types of multiple intelligences are most strongly associated with successful language acquisition among tertiary-level students of district Khairpure?

### Research Hypothesis

Keeping in view the research objective and question, the following hypothesis was formulated:

$H_1$:    Students with higher levels of linguistic Intelligence show greater proficiency in English language acquisition than those with no or lower levels of linguistic Intelligence.

### LITERATURE REVIEW

Modern English is the principal vernacular of communication, aviation, seafaring, entertainment, science, information technology, business, and radio. In some cases, it even serves as the only language required internationally. It is also referred to as the first universal language. Block & Cameron (2002) revealed that in many sectors, occupations, and professions, including medicine and computers, an operational understanding of English has become a requirement; consequently, over one billion individuals speak English at least minimally at an essential level. The English language holds immense significance in education due to its global reach and widespread use in various fields. English has become the lingua franca of academia, research, and communication, making it essential for students to acquire proficiency in this language. Smith (2018) states that English is the primary language used in international conferences, journals, and academic publications, allowing scholars from diverse backgrounds to exchange ideas and collaborate effectively.

Moreover, English proficiency opens doors to a plethora of educational resources, including textbooks, online courses, and research papers, as highlighted by Johnson (2019). In the beginning, Intelligence was considered a trait that could not be changed; it remains the same as a born quality. However, several experts believe other factors influence learning, i.e., experience, educational background, religion, culture, etc. Scholars defined Intelligence differently, but a Harvard psychologist named Howard Gardner disputed this widely believed notion. He suggested at least seven essential Intelligence in his book Frames of Mind. He has recently added an eighth and brought up the prospect of a ninth. By developing the multiple intelligences (MI) theory, Gardner aimed to expand on the IQ score's narrow view of human potential. He severely questioned the efficacy of measuring Intelligence by forcing people to complete isolated tasks they would never have chosen to complete before when they were removed from their natural learning environment. Gardner argued that the ability to solve problems and create things in a context-rich and naturalistic environment is more closely related to Intelligence. Several people around us are found to be good in the use of language; they have the quality to convince people through their speech or writing skills. They are also found good at telling stories or writing stories. They find it easy to pass messages from one to another. Verbal-Linguistic Intelligence

is one of the multiple intelligences proposed by Howard Gardner. It refers to using language effectively and fluently in written and spoken forms. Individuals with verbal-linguistic solid Intelligence have a gift for words and are skilled at expressing themselves through language, including speaking, writing, and reading.

People with this type of Intelligence often enjoy reading books, writing stories, and engaging in debates or discussions. They have a talent for learning and mastering foreign languages, as well as for understanding the nuances of language and using it to convey complex ideas.

Careers that require vital verbal-linguistic Intelligence include writing, journalism, teaching, law, politics, and public speaking. Famous individuals with vital verbal-linguistic Intelligence include William Shakespeare, Jane Austen, Martin Luther King Jr., and Barack Obama.

Zaidi (2019) suggested that educators who use multiple intelligences and mainly use Linguistic intelligence instruction techniques need to emphasize its development in schools; linguistic Intelligence may be the Intelligence for which strategies are easiest to develop. A broader spectrum of students can use the five tactics listed below because they emphasize open-ended language exercises that bring out each student's linguistic Intelligence. These are brainstorming, journal writing, tape recording, storytelling, and publishing. Note the crucial components you want to include in the story as you are ready to tell it. Then, use your imagination to conjure up a unique setting, a lively cast of characters, or a silly story to deliver the message. It could be beneficial to first visualize the story before practicing speaking it to your partner or a mirror. Children can learn from stories regardless of how creative or unique they are. Brainstorming: Any topic can be discussed during the brainstorming session, including phrases for a class poem, concepts for group projects, ideas for a class picnic, and more. Participants are encouraged to discuss anything that comes to mind during a pertinent brainstorming session. No ideas are to be disparaged or discounted, and each suggestion is valued equally. After everyone has had a chance to speak, examine the ideas for patterns or groups, and ask students to reflect on the ideas or apply the ideas to a particular project. Using this tactic, every pupil who

contributes an idea is given specific credit for their original ideas.

Some essential teaching tools in every classroom are tape recorders and other audio recording equipment, including software; this is because they offer young children a way to explore their language abilities and support them in using verbal communication to engage with others, solve problems, and express their feelings. Tape recorders can be used by information reporters (such as Talking Books) and information collectors (such as during interviews). Information can also be transmitted via tape recorders. For instance, one might be put at each activity center so kids can learn about the subject. To foster students' intellectual development, it is necessary that every classroom ought to have tape recorders, and teachers ought to have a regular schedule of activities.

Students who keep personal journals create continuing written records about a specific domain. The domain can be broad or relatively narrow. Journals can be kept in math, science, literature, and other areas. They can be read aloud to the class regularly, kept completely private, or shared only with the teacher and students. They can also integrate with multiple intelligences by permitting images such as sketches, photos, dialogues, and other nonverbal data.

Students who keep private diaries provide ongoing written records relevant to a particular field. The domain may be pretty broad or relatively minor. Journals can be kept in maths, science, literature, and other subjects. They can be shared with the teacher and students only, kept private, or read aloud to the class regularly. They can communicate with other Intelligence by permitting visuals like drawings, pictures, conversations, and other nonverbal data.

## RESEARCH METHODOLOGY

The current study aims to confirm or verify Multiple Intelligence efficacies in learning English as a foreign language, and an empirical investigation supports this research. In these investigations, any phenomenon is observed and measured, and information is gained through experience rather than theory or belief. Verifiable evidence is used in this research process to produce study findings.

Therefore, keeping in view the need of the present research study, a sequential explanatory design was used to reach the conclusions; it is a design that starts

with quantitative data collection & analysis and then follows up with qualitative data collection & analysis, which leads to interpretation. This helps to determine what quantitative results need further explanation. Combining quantitative and qualitative methodologies is deemed valid for several reasons. Statistical analysis and numerical data are provided by quantitative research, which offers insights into trends, connections, and the generalizability of findings (Smith & Jones, 2019). The underlying causes, perceptions, and experiences of participants are explored in depth in qualitative research, which offers a richer understanding of the research situation (Brown et al., 2020). Combining the two approaches enables researchers to address many facets of their research issue and produce a more thorough and balanced analysis (Johnson & Lee, 2018). Since the strengths of one method can compensate for the weaknesses of the other, triangulation, a process of cross-validating findings from multiple sources, improves the credibility and reliability of the research findings (Chen et al., 2021).

Undergraduate students and English language teachers from public universities in the Khairpur district made up the population. There are four (04) HEC-recognized public sector universities in the district of Khairpur, i.e., Khairpur College of Agricultural, Engineering & Technology, Khairpur Mir's, Mehran University of Engineering & Technology Shaheed Zulfiqar Ali Bhutto Campus, Khairpur Mir's, The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mir's and Shah Abdul Latif University Khairpur Mir's.

Due to their adaptability, affordability, and capacity to produce reliable and representative data, multi-stage sampling approaches have several advantages in survey research. Multi-stage sampling can be beneficial when dealing with vast and diverse populations because it divides the sampling process into phases, with subsets of the population selected at each stage (Kish, 1965). First, by cutting down on the time and resources needed to reach the complete population, multi-stage sampling enables researchers to effectively manage the logistics of data collecting (Babbie, 2016). Second, it gives researchers a framework to consider the population's geographic or administrative divisions, allowing them to order a sample representative of various strata or regions

(Fowler Jr., 2013). Additionally, multi-stage sampling makes it easier to include elusive or dispersed groups, expanding the sample's coverage and representation (Groves et al., 2009). Researchers can maintain the integrity of the sampling process and guarantee that the final sample is objective and generalizable to the total population by using the correct probability sampling procedures at each stage (Lohr, 2019). Multi-stage sampling procedures are valuable tools in survey research because they allow for efficient large-scale investigations while retaining the quality and representativeness of the collected data.

- In the first stage, the universities providing tertiary-level education in Khairpur Mir's were taken as a cluster based on their education type. Out of four (04), three universities provide technology education, while one of the universities, Shah Abdul Latif University Khairpir, offers general education.

- In the second stage, Shah Abdul Latif University was selected using a random sampling technique by drawing a name from the hat; it refers to the process of choosing a subset of individuals from a large population in a way that each member of the population has an equal chance of being included in the sample.

- In the third stage, using stratified random sampling techniques, two (02) first-semester students, a male & female, were selected (students' consent/willingness was given due consideration) from each department resulting in a sample of thirty-two (32) students, as there are sixteen (16) departments providing different types of education including; special education, teacher education, gender studies, mathematics, physics & electronics, zoology, botany, computer science, archeology, Pakistan studies, statistics, commerce, business administration, English, chemistry and international relations. This aims to gather a more diverse range of viewpoints and experiences by enrolling male and female students from each department. This method acknowledges the possibility of gender-based differences in answers, attitudes, and study topic outcomes. The study aims to improve the thoroughness of its findings and offer a more nuanced view of the topic under inquiry by adopting this gender-balanced sample technique.

- In the fourth stage, the thirty-two (32) selected students were randomly divided into two groups of the strength of sixteen (16) each, and using criterion sample procedure, two (02) of the teachers were selected to teach English to those two groups of students. The criteria were that the teachers:
  - Holding M.Phil./MS degree in English Language or literature;
  - Having a teaching degree or certificate, i.e., PTC, CT, B.Ed., or M.Ed.;
  - Have attended English language teaching courses;
  - Familiar with the latest recommended English language teaching techniques and methods;
  - Have successfully used those techniques or methods in their routine;
  - Having at least five years (05) of teaching experience at the tertiary level.
  - They are willing to participate in the present research study. They are ready to provide their keen observation about the participants by answering interview questions and filling out a questionnaire for each participant.
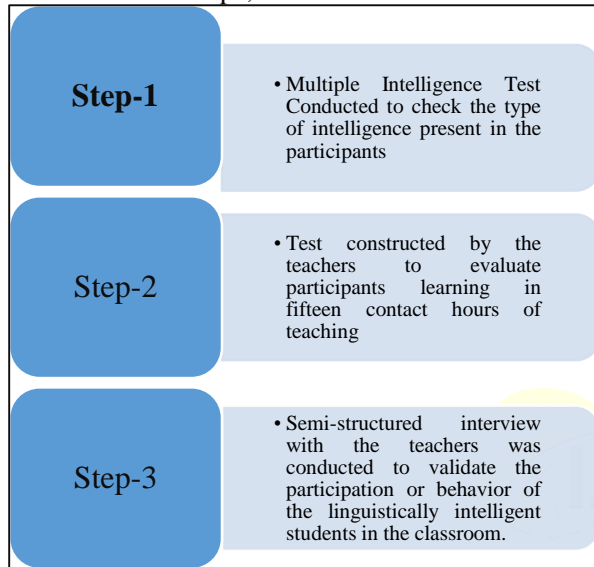
  Data was collected in the following phases:

- **First Phase**: A standardized test for checking the type of Intelligence of a group of undergraduate students was arranged to sort linguistically intelligent students. The test is constructed by a worldwide testing service (businessball.com) and is frequently used by educators and non-specialists to check the dominating Intelligence present in a person. Further, before using the model test, it was piloted to check its validity and reliability. In the piloting process, five (05) students were selected from the sample population and were asked to fill out the questionnaire; they were also guided to perform that task. This process helped me understand that the questionnaire language or text posed no difficulty to the participants, ultimately indicating the instrument's reliability. Additionally, the questionnaire was shared with the field experts who validated it and proposed it fit for further process.

- **Second Phase**: the first group of sixteen (16) students was taught English as a foreign language using standard language teaching techniques/methods used by language teachers in Pakistan in general and Sindh in particular, while the second group of sixteen (16) students was English using the latest recommended methodologies or techniques for teaching English. Both genders were given equal representation in each group.

- **Third Phase**: A test constructed by the language teachers (02), which means the teachers who taught both groups, was conducted to differentiate the learning of the English language by linguistically intelligent and other students. The test was piloted to check its reliability, and after the checking and scoring procedure, it was shared and discussed with experts for checking validity and further improvement. It was finalized after dropping and adding a few questions.

- **Fourth Phase**: The language teachers (02) who participated in this experimental research study were interviewed using the semi-structured data collection technique. Semi-structured interviews offer more flexibility than structured interviews, which use a predetermined list of standardized questions, enabling the interviewer to go further into subjects and follow up on intriguing points brought up by the participant. Typically, the interview starts with a core group of questions or topics, and as the conversation develops, the interviewer can adjust and add new questions. This method is highly suited for gaining in-depth insights and comprehending complicated issues from the participants' viewpoints since it enables more decadent and nuanced responses. Semi-structured interview data is frequently recorded and analyzed utilizing qualitative research techniques. To get information about linguistically intelligent students' class active participation, critical thinking, language proficiency, creativity, eagerness to learn, peer collaboration, and attention to detail during classroom teaching. The conversation during the instructors' semi-structured interviews covered several important subjects, with a focus on the behavior and engagement of the students in class. Teachers were asked for their perspectives on the different elements that affect students' classroom conduct, such as their degree of engagement, interactions with peers, and receptivity to teaching strategies. Teachers were also urged to discuss any patterns of behavior, both desirable and problematic, that they had observed among

the children. They were also asked to complete a questionnaire about each student's behavior in the class. The questionnaire was designed by defining clear research objectives and choosing appropriate question types, such as the Likert scale, to explore various aspects of student engagement. The questions were carefully sequenced, and the questionnaire was piloted with a small sample to ensure its clarity and relevance. In the present research study, data was collected in different steps, which are as follows:



**Step-1** • Multiple Intelligence Test Conducted to check the type of intelligence present in the participants

Step-2 • Test constructed by the teachers to evaluate participants learning in fifteen contact hours of teaching

Step-3 • Semi-structured interview with the teachers was conducted to validate the participation or behavior of the linguistically intelligent students in the classroom.

### Quantitative Data Analysis

"*Students with higher levels of linguistic intelligence show greater proficiency in English language acquisition than those with no or lower levels of linguistic intelligence.*"

To test this hypothesis, '*Linear Regression Analysis*' was used, a test that helps examine and quantify the relationship between two (02) variables. For this purpose, the scores of linguistically intelligent participants were compared with those of those other than linguistically intelligent participants. The test was run using SPSS version-23. The tables generated are displayed below:

**Table 4.1**

Model Summary [b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .542[a] | .294 | .271 | 16.428 |

a. Predictors: (Constant), Linguistic intelligent
b. Dependent Variable: Post-Test scores

The regression analysis reveals that the model, which includes linguistic Intelligence and participants with other than linguistic Intelligence as predictors, explains approximately 29.4% of the variability in post-test scores. The adjusted R Square of 27.1% suggests that this explanation accounts for the complexity of the model. The coefficient for "Linguistic intelligence and others" is 0.542, indicating a positive relationship with post-test scores. However, further analysis is required to determine the true impact of linguistic Intelligence and other factors on these scores. The standard error of the estimate is 16.428, reflecting the prediction variability.

**Table 4.2**

ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 3375.184 | 1 | 3375.184 | 12.506 | .001[b] |
| | Residual | 8096.816 | 30 | 269.894 | | |
| | Total | 11472.000 | 31 | | | |

a. Dependent Variable: Post-test scores
b. Predictors: (Constant), Linguistic Intelligence and participants having other than
Linguistics Intelligence

According to the ANOVA results, the regression model, which uses "Linguistic intelligence and participants having other than linguistics intelligence" as predictors, is statistically significant (p 0.001), indicating that it successfully accounts for a sizable portion of the variation in post-test scores. The predictors contribute to this explanation, but further investigation is needed to pinpoint the precise role played by each element in the model.

**Table 4.3**

Coefficients [a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | Sig. | 95.0% Confidence Interval for B Lower Bound | Upper Bound |
|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 78.227 | 9.028 | | .000 | 59.791 | 96.664 |
| | Linguistic Intelligence and participants having other than i Linguistics Intelligence | -20.580 | 5.820 | -.542 | .001 | -32.466 | -8.695 |

a. Dependent Variable: Post-test scores

With a coefficient of -20.580 and a standardized coefficient of roughly -0.542, "Linguistic

intelligence and participants having other than Linguistics Intelligence" significantly negatively impact post-test scores in this regression analysis, indicating that post-test scores tend to decline as this factor increases. The constant term, which has a value of 78.227 and represents the expected post-test score when all predictors are zero, is likewise notable. These results emphasize these predictors' statistical importance and impact on post-test results.

**Table 4.4**

| Residuals Statistics <sup>a</sup> | | | | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Mean | Std. Deviation | N |
| Predicted Value | 37.07 | 57.65 | 48.00 | 10.434 | 32 |
| Residual | -17.647 | 44.933 | .000 | 16.161 | 32 |
| Std. Predicted Value | -1.048 | .925 | .000 | 1.000 | 32 |
| Std. Residual | -1.074 | 2.735 | .000 | .984 | 32 |
| a. Dependent Variable: Post-test scores | | | | | |

According to the "Residuals Statistics" section, the regression model typically predicts post-test scores well, as shown by a mean residual that is almost zero. The standard deviation of 16.161 indicates that individual predictions do vary, nevertheless. The standardized values suggest that predictions deviate from the mean prediction by up to one standard deviation in both positive and negative directions. This information provides insights into the model's predictive performance and the extent of variability in predicted post-test scores.

## QUALITATIVE DATA ANALYSIS
### Established Usefulness:
*"Over the years, conventional teaching techniques have been refined and have consistently produced positive outcomes. These methods emphasize a systematic, organized approach to language learning, which helps students build a strong foundation in grammar, vocabulary, and communication skills."*

### Alignment with the Objectives:
*"Our main goal is ensuring you understand English well. Our traditional methods closely fit this goal by offering a clear and thorough curriculum that includes all the crucial facets of language learning."*

### Resource Availability:
*"Modern ELT methods often require access to technology and digital resources, which may not be equally available to all students. By sticking to conventional methods, we aim to ensure every*

*student can participate fully and access the necessary materials".*

### Diverse Student Backgrounds:
*"Our class is composed of students from diverse backgrounds, with varying levels of English proficiency. Conventional methods allow us to cater to a wide range of learners and provide the necessary support to help each student progress at their own pace".*

### Balanced Approach:
*"While we value tradition, we also acknowledge the benefits of incorporating modern elements when appropriate. Therefore, we remain open to exploring modern techniques that complement our conventional teaching methods and enhance your learning experience".*

## FINDINGS
A positive relationship exists between linguistic Intelligence and learning English as a foreign language because the participants whose linguistic Intelligence was dominant in the Multiple Intelligence standardized test scored high pre and post-test English proficiency tests. In inferential statistics, regression analysis Model Summary has also highlighted a positive correlation but a weak one; moreover, analysis of the ANOVA Table suggests a meaningful relationship between linguistics intelligence (predictor) and learning of English (dependent variable), although other factors (individual factors) can also play their role. The coefficients further support the significance of the predictor (linguistic Intelligence) in learning English as a foreign language. However, residual statistics indicate that it may not be equally precise across all observations because of the other factors (ANOVA table).

The model summary reveals a meaningful but not exhaustive impact of the predictor variable' ELT methodologies' on learning English as a foreign language as other factors are influencing, but ANOVA reveals a meaningful impact of ELT methodologies on the dependent variable; the same is suggested by coefficient table 4.55 variation in ELT methodologies can have negative impact. Further residual statistics support the findings of the coefficient analysis table.

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