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A Comparative Study of Multiple Intelligences Profiles and English Language Achievement Among Primary School Students in Urban and Rural Areas

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Abstract: This research study aimed to measure and compare the MI profile of urban and rural primary school students to understand the relationship between intelligence type and English language learning. A cross-sectional research design was adopted to solve the query, and using purposive sampling techniques, two (02) of the schools, one each, i.e., urban & rural, were selected, and twenty-six students from each school were included in the study sample. Both genders were given equal representation. A standardized test was used to measure the participants' MI; later, a test for grade-five level students was constructed to measure their proficiency in all language skills, i.e., listening, speaking, reading, and writing. The standardized and language proficiency test results were compared, showing a relationship between linguistic-verbal Intelligence and language learning, and has ultimately proved the theory proposed by Harward Gardner.

Key Words: Multiple Intelligences, Profiles, English Language Achievement, Primary School Students, Urban Areas, Rural Areas, Comparative Study, Intelligence Assessment, Linguistic Intelligence

Background of the Study

This research study investigated whether Howard Gardner (1983) proposed types of intelligence impact on language learning outcomes at the primary school level in rural and urban Karachi, Sindh. When we critically study Sindh's rural and urban areas, we find a lot of differences in the facilities available to the teachers and students for teaching and learning (Ahmed, 2015). The impact of the apparent potential disparities can be observed from the students' personalities. Students with rural backgrounds are found to be hesitant to speak English or show a lack of confidence. The students living in a city like Karachi, where not only schools are loaded with facilities but also have access to other facilities like internet and cable networking for televisions at home, are found to be confident and good in spoken English (Hussain, 2017).

Moreover, children aged 5-10 years at the primary level have the potential to learn and adopt new things more quickly than in later years of life (Armstrong, 2010). According to Gardner (1983), learning any language is easy for linguistically intelligent people. This research study investigated how linguistically intelligent children learn English as a second, third, or fourth language in different scenarios, i.e., learning a language with the availability of required facilities and without facilities.

Research Objectives

The objectives of this research study are as follows:

- To appraise the Multiple Intelligences profiles of the primary school students of rural and urban areas of Sindh
- To examine the existing relationship between Multiple Intelligence and English language learning at the primary school level in rural and urban areas of Sindh.

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Research Questions

Following were the research questions that guided this research study:

- What are Multiple Intelligence profiles of primary school students in rural and urban areas of Sindh?
- Does the type of intelligence students have affect English language learning in rural and urban areas of Sindh?

Research Hypothesis

H₀: There is no significant relationship between the multiple intelligence (MI) profiles and English language achievements in rural and urban areas of Sindh.

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 (2010) 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 (Diaz, 2017). 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 Block & Cameron (2010). In the beginning, Intelligence was considered a trait that could not be changed; it remained 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. His book *Frames of Mind* suggested at least seven essential intelligence concepts. 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 (Richards & Rodgers, 2001).

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.

Soomro (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 practising 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 centre so kids can learn about the subject. Teachers must use tape recorders and other regular activity schedules to foster students' intellectual development.

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

A cross-sectional study design was adopted to appraise the multiple intelligence profiles of rural and urban primary school students and measure the relationship between MI and English language learning. It is an analytical research study design that the researchers use to compare the expected outcomes with related and unrelated criteria (Creswell, [2009](#)).

The study population was public sector primary schools in rural and urban Sindh. Using purposive sampling techniques, two (02) of the primary schools, one for each, i.e., rural (District Khairpur) and urban (Karachi), were selected. Further, from those two schools, twenty-six grade-five students, including males and females thirteen (13) each, were selected to be included in the research study.

Data Collection

Data was collected in two (02) phases; in the first phase, the type of Intelligence present in the selected students was appraised using a standardized test for checking the type of Intelligence present in an individual, and it was arranged in ascending order 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. Considering the students' language barriers, the standardized test was translated into the local language for better understanding and results for the study.



Further, the researcher and three (03) colleagues were present throughout the data collection phase to help the participants. This process helped him to 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.

In the second phase, a test constructed by a language teacher with four sections related to all language skills, i.e., listening, speaking, reading, and writing, was conducted to differentiate the students' English language learning. This test was constructed while considering the learning of English expected by grade-five level students in Sindh and was also piloted to check its reliability. After the checking and scoring procedure was shared and discussed with experts to check the validity and further improvement, it was finalized after dropping and adding a few questions.

In the third phase, the scores of students in the present test are compared to their scores in the standardized test, which was initially conducted to appraise the type of Intelligence present in them.

Data Analysis

The collected data was analyzed in two phases; in the first phase, it was compared to find the difference in the type of Intelligence present in any participant and the scores of that participant in the test prepared to appraise the English learned by that participant. In the second phase, a linear regression analysis test was used to test the designed null hypothesis H_0 .

Discussion

To achieve objectives 1 and 2 of this research study, which was *to appraise the Multiple Intelligences profiles of the primary school students of rural and urban areas of Sindh and to examine the existing relationship between Multiple Intelligence and English language learning at the primary school level in rural and urban areas of Sindh*. The collected data through tests was placed in the tables, which indicated the highest score of the participants in the MI test in a particular type of Intelligence oppressed by the participants and their scores along with percentage in English proficiency designed to check language proficiency of grade-five students residing in urban and rural areas of region Sindh.

Phase-One

The highest scores in the MI test and scores in the language proficiency test of participants living in urban areas are placed in the table below:

Table 1

Group-One (Urban Participants)

S#	Gender	Type of Intelligence	Score in MI Test(50)	%Age	Score on Language Proficiency Test (10 each)				Total (40)	%Age
					Listening	Speaking	Reading	Writing		
1	F	Linguistic-Verbal	48	96	9	8	9	9	35	87.5
2	F	Linguistic-Verbal	45	90	8	9	8	9	34	86
3	M	Interpersonal	46	92	8	7	8	9	32	80
4	M	Linguistic-Verbal	45	90	8	6	7	8	29	72.5
5	F	Linguistic-Verbal	42	84	8	8	7	6	29	72.5
6	M	Linguistic-Verbal	46	92	7	8	8	6	29	72.5
7	F	Linguistic-Verbal	47	94	7	8	6	7	28	70
8	F	Linguistic-Verbal	41	82	8	7	7	8	30	75

9	M	Linguistic-Verbal	40	80	8	6	7	6	27	67.5
10	M	Visual-Spatial	44	88	6	6	7	8	27	67.5
11	F	Linguistic-Verbal	44	88	6	7	7	6	26	65
12	F	Linguistic-Verbal	44	88	7	8	6	5	26	65
13	M	Interpersonal	38	76	7	7	5	6	25	62.5
14	M	Musical	41	82	7	6	7	6	24	60
15	M	Linguistic-Verbal	42	84	6	6	8	6	24	60
16	F	Musical	44	88	6	5	6	6	23	57.5
17	M	Interpersonal	42	84	7	6	5	5	23	57.5
18	M	Logical-Mathematical	44	88	5	6	7	5	23	57.5
19	F	Musical	43	86	7	7	4	4	22	55
20	M	Bodily-Kinesthetic	38	76	6	5	6	5	22	55
21	F	Interpersonal	46	92	6	7	4	3	20	50
22	M	Logical-Mathematical	43	86	7	4	6	3	20	50
23	M	Logical-Mathematical	43	86	5	5	6	4	20	50
24	F	Logical-Mathematical	41	82	5	5	6	4	20	50
25	F	Bodily-Kinesthetic	39	78	4	3	4	5	16	40
26	F	Logical-Mathematical	39	78	4	4	6	5	19	17.5

Considering their percentage results in the arranged language proficiency test, the participants' results were placed in descending order. The results depict that most participants whose MI profile was related to the Linguistic-verbal scored more than or equal to 60% marks. This proves the Gardner's theory of Multiple Intelligence that the type of Intelligence present in a person always affects the person's personality.

Further, the MI profiles reflect that two of the participants were interpersonal, and both were male participants; one of the participants scored 80% marks in the language proficiency test arranged, while the other also scored 62.5% marks, which could be interpreted that interpersonal intelligence profile also supportive in a language learning.

The data in the above table also reveals that 53.8% of female participants were linguistic-verbal; however, only 30.7% of males were linguistic-verbal in the standardized test.

It is also concluded from the above data set that the MI profile of 42.3% of urban participants was linguistic-verbal, meaning that people living in urban areas have good language learning skills.

The data of rural participants was also placed in the table and then arranged in descending order in the table below:

Table 2

Group-One (Rural Participants)

S#	Gender	Type of Intelligence	Score in MI Test(50)	% Age	Score on Language Proficiency Test (10 each)				Total (40)	%Age
					Listening	Speaking	Reading	Writing		
1	F	Linguistic-Verbal	45	90	8	9	7	9	33	82.5



2	F	Linguistic-Verbal	39	78	8	7	8	9	32	80
3	M	Linguistic-Verbal	47	94	8	7	8	8	31	77.5
4	M	Interpersonal	46	92	7	7	8	9	31	77.5
5	M	Logical-Mathematical	40	80	7	9	8	6	30	75
6	F	Linguistic-Verbal	45	90	8	8	6	7	29	72.5
7	F	Linguistic-Verbal	38	76	8	8	7	6	29	72.5
8	M	Linguistic-Verbal	46	92	9	6	6	7	28	70
9	F	Linguistic-Verbal	43	86	7	7	7	7	28	70
10	M	Interpersonal	38	76	7	7	7	6	27	67.5
11	M	Linguistic-Verbal	42	84	6	8	7	6	27	67.5
12	M	Visual-Spatial	44	88	6	6	7	7	26	65
13	M	Logical-Mathematical	44	88	5	6	8	7	26	65
14	F	Bodily-Kinesthetic	45	90	6	8	5	7	26	65
15	M	Musical	39	82	6	6	7	6	25	62.5
16	F	Logical-Mathematical	45	90	6	6	7	6	25	62.5
17	M	Interpersonal	42	84	7	7	5	5	24	60
18	F	Musical	43	86	6	5	6	7	24	60
19	M	Bodily-Kinesthetic	40	78	6	6	6	5	23	57.5
20	F	Musical	45	90	7	8	4	4	23	57.5
21	M	Logical-Mathematical	44	88	7	3	7	5	22	55
22	F	Interpersonal	46	92	6	7	6	3	22	55
23	F	Logical-Mathematical	42	84	5	5	6	5	21	52.5
24	F	Logical-Mathematical	30	60	4	5	6	5	20	50
25	M	Logical-Mathematical	43	86	5	5	5	4	19	47.5
26	F	Bodily-Kinesthetic	40	80	4	5	4	5	18	45

The results again depict that most participants whose MI profile was related to the Linguistic-verbal scored more than 67.5% marks. This proves the Garder theory of Multiple Intelligence that the type of Intelligence present in a person always affects the person's personality.

Further, the MI profiles reflect that three of the participants were interpersonal, and both were male participants; one of the participants scored 77.5% marks in the language proficiency test arranged, while the other also scored 67.5% marks, and the third participant scored 60%, which could be interpreted that interpersonal intelligence profile also supportive in a language learning. However, there were several participants in the rural group who scored.

The data in the above table also reveals that 38.46% of female participants were linguistic-verbal; however, only 23.07% of males were linguistic-verbal in the standardized test.

It is also concluded from the above data set that the MI profile of 30.76% of rural participants was linguistic-verbal, meaning that people living in urban areas have good language learning skills. Further, it is concluded that participants in rural areas scored better on the English language proficiency test than urban ones. However, having a different profile than the linguistic-verbal, 69.23% of participants scored more than 60% in the English language proficiency test.

Phase-Two

"There is no significant relationship between the multiple intelligence (MI) profiles and English language achievements in rural and urban areas of Sindh."

The results, i.e., the MI standardized test and English language proficiency test, show a correlation between one of the Intelligence linguistic-verbal and English language proficiency tests because the results indicate that linguistic-verbal participants performed well on the language proficiency test. It is also observed that some other types of Intelligence, like interpersonal, logical-mathematical, musical, and bodily-kinesthetic participants, also performed well in the proficiency test. Still, their score was not as high as that of linguistic-verbal.

Further, to check the relationship between MI and English language learning achievements, a hypothesis was formed, which was tested using 'Linear Regression Analysis, which 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 3

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

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

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 5**Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	78.227	9.028		8.665	.000	59.791	96.664
1 Linguistic Intelligence and participants having other than i Linguistics Intelligence	-20.580	5.820	-.542	-3.536	.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 6Residuals Statistics^a

	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. Nevertheless, the standard deviation of 16.161 indicates that individual predictions do vary. 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.

Conclusion

The following are the conclusions drawn from the present research study:

- The MI theory proposed by Gardner is equally effective in urban and rural areas.
- People holding linguistic-verbal Intelligence perform well when learning a language.
- Other intelligences, i.e., interpersonal, bodily-kinesthetic, and logical-mathematical, can also learn language more effectively than other intelligences.

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