



Investigating relationship of Multiple Intelligences with English Language Teaching Strategies at secondary level in Khyber Pakhtunkhwa-Pakistan

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The purpose of the study was to examine the relationship of Common Multiple Intelligences (CMIs) and preferred English Language Teaching Strategies (PELTS) of English Language Teachers, compare their gender differences, and ascertain their relationship, working in government schools of Zone 3 Khyber Pakhtunkhwa. A sample of 300 [n=150 female+150 male] English language teachers was chosen employing stratified and purposive sampling techniques. Two questionnaires were developed by adapting Armstrong's Multiple Intelligences Inventory-MII (2009) and Oxford's (1990) Strategy Inventory of Language Learning (SILL). Data were analyzed through means, STD, independent sample t-test, and Spearman's rank correlation coefficient (r-value) with SPSS (V-26). A strong relationship $r = 0.531$ was found between PELTS (Memory Strategies) and CMIs (Verbal-Linguistic Intelligences) among English language teachers. These findings imply that language teachers do not take into account their multiple intelligences (MIs) while designing or selecting English language teaching strategies (TS). It is suggested that the teachers must be aware of their own



intelligence strengths to be better able to select good TS to help the young minds in achieving their learning goals. The awareness of personal MIs strengths and learning styles is also commended for learners. The study attempts to provide a framework for English language teachers to improve their teaching through adopting a more practical approach of utilizing their MIs in the selection and development of TS. The findings can be helpful for all stakeholders in designing lessons, materials, and teaching-learning strategies and conducting further research for the professional and academic development of both teachers and students.

Keywords: *English as Second Language, English Language Teaching, Multiple Intelligences, Teaching Strategies*

Introduction

English has gained prestige and status as a global language. As a result, more and more people are interested in learning English as a second language (ESL) or foreign language (FL). People not only want to learn English to pass their exams, but they also want to achieve the same English instruction as the speakers. To cope with the additional needs of students, ELTs must adopt or formulate different English language teaching strategies that must meet the subject's needs and needs of students using new academic skills and systems (Viesca, Joseph, & Commins, 2019). Differences between English teachers, from specific proficiency to a style of teaching in general, personal characteristics and teaching choices, and a reluctance to understand play an important role in the effectiveness of teaching (Alkhaldeh, 2020). Intelligence is one of the most important differences in a person. Teachers' beliefs about intelligence influence many decisions and their teaching activities (Bawazeer, 2015).

Multiple Intelligences:

Intelligence, as suggested by Howard Gardner (1983), is not one expert, but rather every human being has different characteristics or mental profiles that make him or her "intelligent" and so on. Gardner identified a wide variety of similar conditions / disorders, making each student and teacher a "different mind" in the learning and teaching process (Boonkongsan, Nakaved, & Pranarach, 2020). The multi-disciplinary theory guides ELTs in the design of teaching and learning activities that enhance the success of ESL students and enhance ELTs proficiency. Baaqeel (2020) states that learning L2 or FL can be fun for students if the teacher designs classroom activities taking into account individual differences, learning styles, and learning needs.

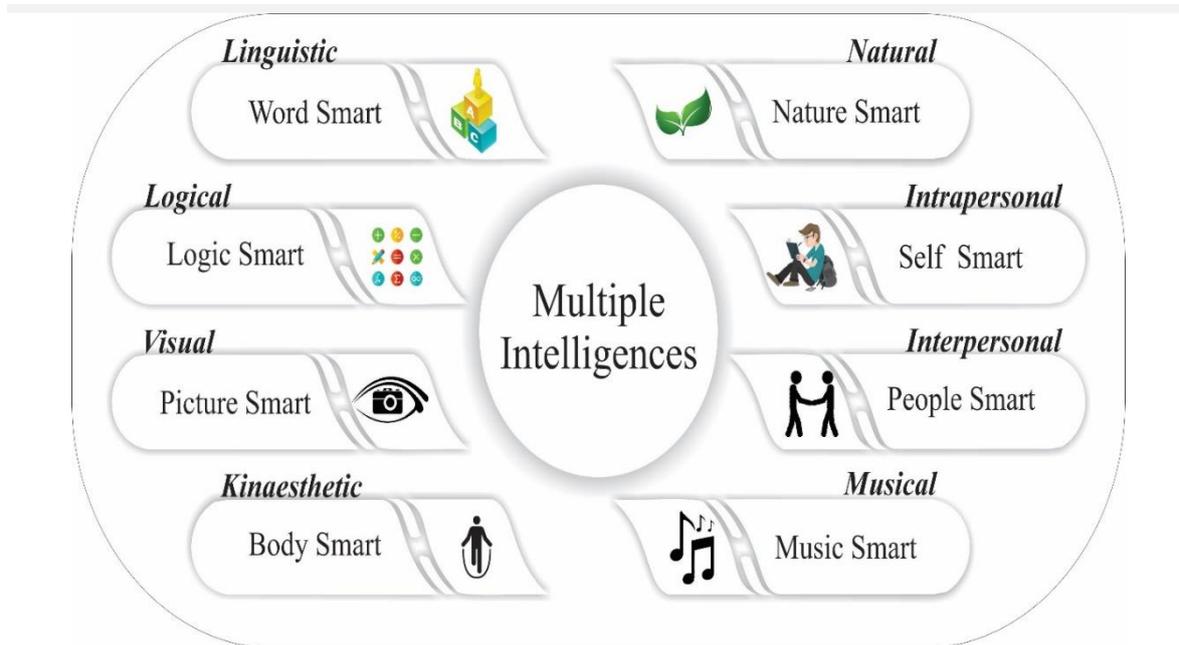


Figure 1: Gardner's (1983) Multiple Intelligences

1. Verbal-Linguistic Intelligence:

Hali (2017) states that people with fluency in language demonstrate proficiency in the use of their vocabulary and linguistics by engaging in activities such as reading, writing, storytelling and memorization of language skills. Some of the activities used by language teachers to improve student learning, motivation and speed of learning in a second language (L2) complete vocabulary and scrabble writing. These activities help all L2 learners, but are especially helpful for learners of smart and language. They enjoy participating in creative writing competitions, reading works in public, writing essays, and so on.

2. Logical-mathematical intelligence:

People who have this personal information as a source of strength are good at logical thinking, number understanding, and critical thinking (Ismail, AlSaqqaf, & Din, 2020; Safran, 2016). This group of L2 students can be engaged in activities such as reporting and surveying surveys, describing parameters and graphs, word processing tasks, sorting out language elements based on different criteria, problem solving, and critical thinking tasks.

3. Visual-spatial intelligence:

People with this biological knowledge can remember pictures, illustrations, and usually enjoy reading, understanding, and memorizing maps and are aware of their surroundings (Luo & Huang, 2019). Moradi, Ghahari and Abbas Nejad, (2020) recommend activities and activities for these students who can help improve and enhance their language skills. These tasks include graphic design, smart graphic design and data, disk creation, and video / voice recording functions.



4. Musical intelligence:

Central to this intelligence/focus is an expertise in sounds, rhythms, tones, and music. English teachers may ask these students to practice singing, writing vocabulary, finding moving words, learning about music and instruments in the spoken language (TL), and learning about TL sounds. e.g., pitch, volume, pitch and music) traditional music and culture, and so on. (Sternberg, 2020).

5. Bodily-kinesthetic intelligence:

According to MI theory, these people have a sense of time, they learn through physical activities such as doing activities, exploring and discovering the environment around them. English teachers can create a group of these students and assign them different activities and games which include exercise, excursions, property hunting, and so on. and then describe in detail the activities that the students did in front of the class (Roohani, Etesami, & Mirzaei, 2020).

6. Interpersonal intelligence:

People who have experience dealing with people have social characteristics. They have environmental issues and how others feel and use this experience to balance and interact with others. Partner activities, written communication such as pen markers, interactive video games, and design reading activities can erase the language and communication skills of these L2 students (Saidi, 2020).

7. Intrapersonal Intelligence:

These people are very intelligent, they think, and they think very well. They know their strengths and use their knowledge to make good decisions, since the result of their actions is their character (González-Treviño, Núñez-Rocha, Valencia-Hernández, & Arrona-Palacios, 2020). Hasnidar, Sulihin and Elihami (2020) explain that these students know how to motivate themselves for learning activities and how maintaining a balanced emotional outlook ultimately leads to success in the L2 learning process. Writing essays, biographies, essays, journalism, research projects, and research interests can help these students develop language skills (Saidi, 2020).

8. Naturalistic Intelligence:

Such people are highly eco-friendly and keen of natural environment. They enjoy spending time in learning about flora and fauna. The language teachers can adapt their teaching for such people through activities such as photo essays, nature walks, investigating natural phenomenon and recognizing things in nature (Quirantes Morillas, 2020).

Teaching strategies:

ELTs use effective TS in their classrooms to improve their teaching, address student needs, and meet instructional needs (Siddiq, Hussain, & Amjad, 2021). These strategies help teachers to motivate students by providing them with the required results of the learning process, which is why TS has been shown to be important to students and teachers (Munro, 2021).

Luo and Huang, (2019) present one of the best proprietary strategies for learning / teaching English. Divide English teaching / learning strategies into two categories. One group consists of direct learning / teaching strategies and the other is called direct learning strategies. These skills help in learning the language / teaching directly (Roohani, Etesami, & Mirzaei, 2020).

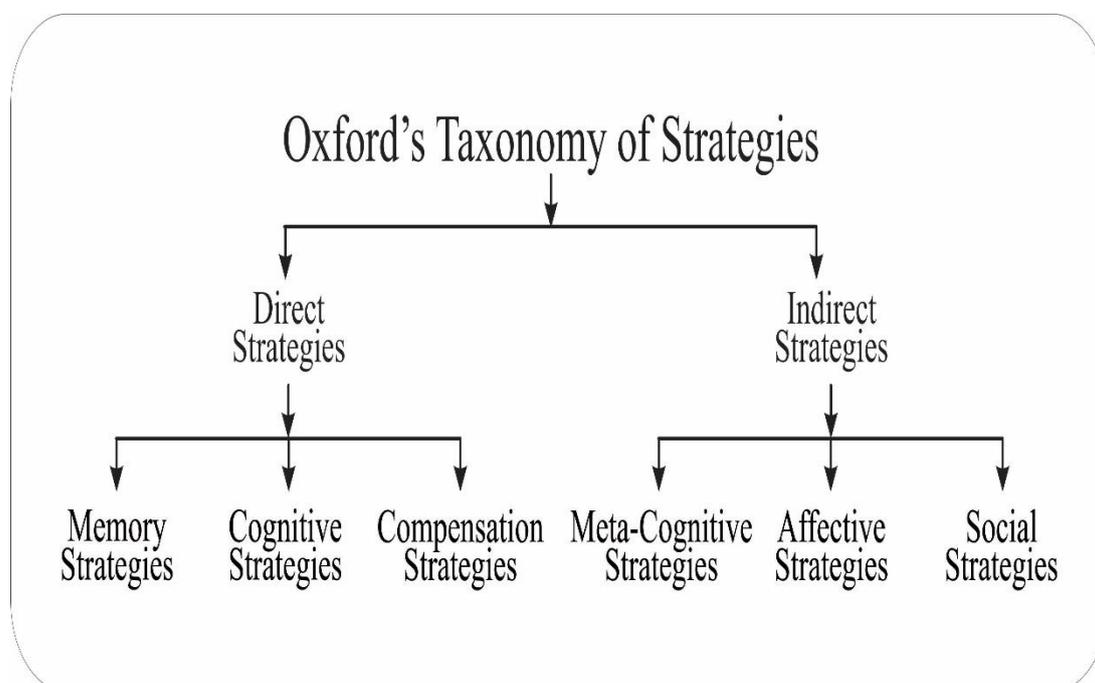


Figure 2: Oxford's (1990) Teaching/Learning Strategies

Direct Strategies:

1. **Memory strategies:** These strategies work by selecting, organizing, storing and utilizing information about the language (Basalama, Bay & Abubakar, 2020). ELT teachers can help their students by combining previously studied materials with new materials, using learning materials such as wood, pictures, sounds, and other improved materials, and repeating and reviewing lessons regularly.
2. **Cognitive strategies:** The importance of such strategies is learned through comprehension. Developmental approaches include practice, reflection, and L2 analysis. ELTs can engage students in activities such as watching cartoons and television shows, writing letters, short stories and news, discussions, group activities, exercise applications, using vocabulary and thesaurus, discussions and debates (Saydaliyeva, Atamirzayeva, & Dadaboyeva, 2020).
3. **Compensation strategies:** English teachers can help their students overcome their weaknesses and weaknesses in L2 by using these strategies. Activities that help students anticipate meanings in context, speak English as much as they can, and give them language symbols are some examples of activities that teachers can use (Pawlak, 2019).



Indirect Strategies

- 1. Meta-cognitive strategies:** These direct strategies help students by suggesting that they focus their reading on the basics, planning and organizing their learning activities, and directly evaluating what they have learned. Knowledge of the techniques used and the results it produces improves the outcome (Elekaei, Tabrizi, & Chalak, 2020).
- 2. Affective strategies:** Effective factors can reduce the value of reading by causing stress and anxiety among students. ELTs can use these strategies to help students reduce their anxiety by motivating them. These strategies include activities such as rewarding students when they perform well and asking them to share their feelings and fears (Milne, 2020; Robiansyah, 2020).
- 3. Social strategies:** Cohesiveness and empathy can make learning L2 a great experience for students. ELTs can encourage their students to ask questions of others when they do not understand anything, form student groups with students to do L2, ask students questions, and organize conversations with native TL speakers to improve and update the language. student experience (Pawlak, 2019).

Objectives of the Study:

Teachers can help intelligent young people to become more talented students, through improved teaching if they share their skills and expertise. The current research aims were:

1. To find out relationship of Common Multiple Intelligences (CMIs) and most preferred English teaching strategies (PELTS).
2. To identify most commonly found Multiple Intelligences (CMIs) among the English language teachers working in schools of Zone 3 of Khyber Pakhtunkhwa.
3. To explore most preferred English teaching strategies (PELTS) used by school English language teachers.
4. To investigate the difference between male and female English language teachers in their commonly found Multiple Intelligences profiles and their most preferred English language teaching strategies in Zone 3 Khyber Pakhtunkhwa.

Research Questions:

Primary Research Question:

1. Is there a relationship of English language Teachers' Multiple intelligences with their preferred language teaching strategies?

Secondary Research Question:

1. Which is the most commonly found type of Multiple Intelligences in working English language teachers of Zone 3 Khyber Pakhtunkhwa?
2. What are the most preferred teaching strategies used by school English language teachers?



3. Do male and female English language teachers be at variance in their commonly found Multiple Intelligences profile and their most preferred English language teaching strategies in Zone 3 Khyber Pakhtunkhwa?

Literature Review

Everyone can be smart or keen in different ways (Merati, Ghonsooly, & Alavi, 2021). Curry (2020) suggests that people who are qualified in Business Administration may not necessarily excel in other professions. Human presenters present a wide range of skills and level of education to achieve a wide range of successes. It is the teacher's job to develop or integrate strategies that help each student in polishing his/her skills. The meaning of the MI theory is a new style of teaching. The MI theory does not only prove beneficial to the outreach curriculum but also to the teaching curriculum (Sarani, & Malmir, 2020). This theory is considered as a successful model for teaching and learning by many educators and researchers. Marcarini (2021) highlights the key to success in teaching-learning, that is, an easy-to-learn environment that affirms the needs of students, their diversity. Alike Jacobs and Renandya (2019) advocating for earlier learning habits of students and putting students at ease in a learning environment due to MI practices. The sheer resources available and the diversity of students put ESL teachers in a difficult position (Shafiee, 2020). Siddiq, Hussain, and, Amjad, (2021) argue that ELT does not choose an option, for the teaching strategies of this choice they are very intelligent, deliberate, and face consequences. By using a variety of learning strategies that help their L2 students to achieve their language learning goals and this is made possible by understanding the environment, language learning environment and needs of students (Basalama, Bay, & Abubakar, 2020; Rubaai, Hashim, & Yunus, 2019).

English has a high status in Pakistan because it is the working language of offices. English is taught as a compulsory subject in public and private schools in Pakistan from grade 1 and, onwards. In recent times, research readings have found MI from students' outlooks and resulting in the production of different grades (Gul & Rafique, 2017). However, the actual rationale behind the present study was to examine the significance of teachers' MIs in relation to their instructional practices.

Research Methodology:

Population and sampling: The population of study was English language teachers, who were teaching in government schools of Zone 3 Khyber Pakhtunkhwa. Convenient sampling technique was used to select a sample of 300 teachers, which consisted of 150 male and 150 female teachers.

Nature of study and instrumentation: As a survey study, current research aimed at to measure correlation between high-quality of English Language Teaching Strategies and Multiple Intelligences of school level English Language Teachers of Zone 3 Khyber Pakhtunkhwa. Oxford's Taxonomy of English Language Teaching/Learning Strategies (1990) and Armstrong's



MIs inventory (2009) were altered into two questionnaires to collect data from sampled group. The questionnaire on teaching strategies comprised of 26 items and the respondents were to select from a 5-point Likert scale from 1-5, where 1 stood for 'Never or almost never for me' and 5 meant 'Always or almost always for me'. The other questionnaire included 24 items linked to diverse kinds of MIs and the respondents were to specify their level of agreement, from 1 that was for strongly disagree to 5 for strongly agree, to the given statements. Sample of the present study were reached out for data collection personally as well as Google form.

Data analysis: Statistical analyses, comprising descriptive statistical techniques to find out means and standard deviations of CMIs and PELTS, independent sample t-test to detect the gender differences of CMIs and PELTS and Spearman's rank correlation coefficient (r_s) test at significance level of $p < 0.05$ was conducted to find correlation between CMIs and PELTS of English language teachers of Zone 3 Khyber Pakhtunkhwa. SPSS (V-26) was used for data analysis.

Results:

Table 1: Descriptive Statistics of Multiple Intelligences

Multiple Intelligences	Mean	SD
Naturalistic Intelligence	12.21	2.234
Visual-spatial Intelligence	12.01	2.624
Logical-mathematical Intelligence	10.87	2.575
Bodily-kinesthetic Intelligence	10.65	2.132
Musical Intelligence	9.96	2.102
Interpersonal Intelligence	11.47	2.279
Intrapersonal Intelligence	11.79	2.399
Verbal-Linguistic Intelligence	11.46	2.701

The analyses of data gathered from 300 participants (150 male and 150 female) suggest that the English teachers of this region most commonly possess Naturalistic Intelligences as their strength (12.21 ± 2.234) and the least found type of intelligences is musical intelligence (9.96 ± 2.101).

Table 2: Descriptive Statistics of Teaching Strategies

Teaching Strategies	Mean	SD
Cognitive Strategies	18.57	3.36
Memory Strategies	18.51	3.32
Meta-cognitive Strategies	15.15	2.79
Compensation Strategies	15.83	3.85
Social Strategies	15.91	3.86
Affective Strategies	19.25	3.93

As can be seen in the table 2, affective strategies are most preferred English teaching strategies by ELTs (19.25 ± 2.93), while the least preferred type of strategies are meta-cognitive strategies (15.83 ± 2.79).

Table 3: Independent Sample t-test for mean score difference in Multiple Intelligences between male and female ELTs

Intelligences	Gender	N	Mean	Std. Deviation	T	df	P																																																																																
Naturalistic intelligence	F	150	12.55	1.614	2.831	176.126	0.002																																																																																
	M	150	11.64	1.134				Visual-spatial intelligence	F	150	11.99	2.352	2.214	189.825	0.600	M	150	10.89	2.375	Logical-mathematical intelligence	F	150	12.24	2.432	3.121	184.541	0.700	M	150	12.23	2.429	Bodily-kinesthetic intelligence	F	150	9.92	2.117	1.315	196.500	0.298	M	150	9.83	1.653	Musical intelligence	F	150	10.45	2.321	1.177	193.713	0.081	M	150	10.39	2.121	Interpersonal intelligence	F	150	11.43	2.432	1.743	187.696	.0571	M	150	11.38	1.876	Intrapersonal intelligence	F	150	11.23	2.435	2.756	192.742	0.175	M	150	11.26	2.122	Verbal-Linguistic Intelligence	F	150	10.61	2.635	1.414	193.469	0.062
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Significant at the 0.05 level

T value for Naturalistic Intelligence (2.831) is statistically significant at $p < 0.05$, which means that Naturalistic Intelligence is more commonly found among female teachers ($M = 12.55$, $SD = 1.614$) than male teachers ($M = 11.64$, $SD = 1.134$).

While t value for Logical-mathematical intelligence (3.121) was not statistically significant at $p < 0.05$ thus there was no differences among Female teachers ($M = 12.24$, $SD = 2.432$) and male teachers ($M = 12.23$, $SD = 2.429$) with regard to Logical-mathematical intelligence. Similarly, the t values of all other types of intelligences are not statistically significant hence it can be concluded that there is no difference between male and female teachers of Zone 3 Khyber Pakhtunkhwa in terms of CMIs.

Table 4: Independent Sample t-test for mean score difference of preferred Teaching Strategies between male and female ELTs

Strategies	Gender	N	Mean	Std. Deviation	T	df	P
Cognitive Strategies	Female	150	21.34	2.245	2.998	185.002	0.000
	Male	150	18.85	3.541			
Memory Strategies	Female	150	19.39	2.134	3.125	158.445	0.000
	Male	150	17.43	3.260			
Meta-cognitive Strategies	Female	150	16.18	2.651	1.189	156.399	0.591
	Male	150	15.91	2.761			
compensation Strategies	Female	150	16.57	2.692	2.089	177.389	0.589
	Male	150	17.24	2.531			
Social Strategies	Female	150	17.41	2.615	1.977	168.141	0.456
	Male	150	18.42	2.562			
affective Strategies	Female	150	18.54	2.533	2.851	156.897	0.231
	Male	150	19.34	2.898			

Significant at the 0.05 level

Table 4 shows that t values of memory strategies (3.125) and cognitive strategies (2.998) are statistically significant at $p < 0.05$ which means that female English language teachers mostly prefer memory and cognitive strategies more than male ELTs of Zone 3 Khyber Pakhtunkhwa. While t values for other strategies are not statistically significant at $p < 0.05$ hence proven that there is no difference between male and female English language teachers in their preference regarding these strategies.

The main objective of the present study was to find out whether there was a correlation between English language teachers' CMIs and their PELTS in Zone 3 Khyber Pakhtunkhwa. Spearman's rank correlation coefficient (r_s) was put into use to measure the strength and direction of correlation between CMIs and PELTS.

Table 5: Spearman's correlation results of MIs and PELTS

		Verbal	Logical	Visual	Bodily	Musical	Interpersonal	Intrapersonal	Naturalistic	
Spearman's r_s	Cognitive Strategies	Correlation Coefficient	.531**	.511*	.517	.512	.516	.513	.519	.511*
		Sig. (2-tailed)	.000	.001	.002	.000	.001	.001	.002	.001
	Memory Strategies	Correlation Coefficient	.180*	.144*	.158*	.102	.042	.082	.118	.033
		Sig. (2-tailed)	.000	.002	.002	.000	.000	.001	.001	.000
	Affective Strategies	Correlation Coefficient	.144*	.153*	.089	.152*	.119	.048	.143*	.203**
		Sig. (2-tailed)	.000	.000	.001	.001	.002	.001	.003	.004
	Social Strategies	Correlation Coefficient	.240**	.204**	.111	.132	.027	.108	.180*	.112
		Sig. (2-tailed)	.001	.004	.000	.001	.000	.000	.001	.005
Compensation Strategies	Correlation Coefficient	.132	.163*	.113	.034	.043	.056	.198**	.123	
	Sig. (2-tailed)	.002	.021	.000	.002	.002	.002	.005	.002	
Metacognitive Strategies	Correlation Coefficient	.247**	.264**	.140*	.150*	.011	.069	.166*	.162*	
	Sig. (2-tailed)	.000	.000	.001	.003	.001	.001	.001	.002	

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

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

Spearman's rank correlation coefficient (r_s) analysis resulted in a strong correlation between the two variables of the study i.e. CMIs and PELTS among ELTs of Zone 3 Khyber Pakhtunkhwa. For instance, it can be seen in table 5 that the correlation coefficient among verbal-linguistic Intelligence and memory strategies, metacognitive, compensation, social, and affective ($r_s = 0.000^{**}$) suggests a strong, positive correlation that is statically significant as the p-value is less than 0.04.

Analysis and Discussion:

Table 1 presents a descriptive analysis of the data collected on CMIs, from 300 participants of the present study. It illustrates that the most commonly found type of MIs among the ELTs of Zone 3 Khyber Pakhtunkhwa is Naturalistic intelligence (mean=12.21) and the least found type is Musical intelligence (mean=9.96).

Table 2 illustrates the most preferred teaching strategies among ELTs of this region are affective strategies (mean=19.25) and the least preferred strategies are meta-cognitive strategies (mean=15.15).

The present study also aimed to find the difference in CMIs and PELTS of male and female ELTs of Zone 3 Khyber Pakhtunkhwa. Results of the Independent Sample T-test (Table 3) indicate that t value for Naturalistic Intelligence (2.831) is statistically significant at $p < 0.05$, which means that Naturalistic Intelligence is more commonly found among female teachers ($M = 12.55$, $SD = 1.614$) than male teachers ($M = 11.64$, $SD = 1.134$). While the t value for Logical-mathematical intelligence (3.121) was not statistically significant at $p < 0.05$ thus there were no differences among female teachers ($M = 12.24$, $SD = 2.432$) and male teachers ($M = 12.23$, $SD = 2.429$) with regard to Logical-mathematical intelligence. Similarly, the t values of all other types of bits of intelligence are not statistically significant hence it can be concluded that there is no difference between male and female teachers of Zone 3 Khyber Pakhtunkhwa in terms of CMIs.

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Table 4 shows that both male and female ELTs use memory and cognitive strategies for teaching the English language. Table 4 further indicates that cognitive strategies are also significant at $p < 0.05$, which means that teachers prefer memory and cognitive strategies more than other teaching strategies. But memory strategies are the top priority of the teachers in this region. The main objective of the present study was to find the correlation between the two variables of the study i.e. multiple intelligences and teaching strategies. It aimed to find the strength and direction of the relationship between the two variables. For the said purpose two questionnaires were administered to collect data from 300 (150 male and 150 female) ELTs working in schools of Zone 3 Khyber Pakhtunkhwa. The data collected through questionnaires were analyzed statistically to find a correlation between the items of both variables. Spearman's rank correlation coefficient (rs) yielded a weak correlation between the two variables of the study i.e. CMIs and the PELTS of ELTs of Zone 3 Khyber Pakhtunkhwa. It means that teachers while selecting

English language teaching strategies, do not consider their strongest MIs rather they use traditional memory-based strategies to teach English.

The main objective of the present study was to find out whether there was a correlation between English language teachers' CMIs and their PELTS in Zone 3 Khyber Pakhtunkhwa. Spearman's rank correlation coefficient (r_s) was put into use to measure the strength and direction of correlation between CMIs and PELTS.

Conclusion

The main objective of the present study was to find the correlation between CMIs and PELTS of ELTs of Zone 3 Khyber Pakhtunkhwa. The researchers of the present study were interested in knowing the extent to which teachers made use of their own multiple intelligences in adopting or designing English language teaching strategies in Zone 3 Khyber Pakhtunkhwa. The findings of the present study suggested that the most commonly found type of intelligence of ELTs was Naturalistic Intelligences (mean=12.21). People with this type of intelligence strength have the ability to understand and learn new concepts through problem-solving and abstract reasoning. Such people enjoy reading, writing, and using language persuasively. Thus, according to the multiple intelligences theory of Gardner (1983), a teacher with this type of intelligence profile should be able to teach the English language through activities that involve accessing language persuasively and analytically instead of relying on traditional methods of teaching. But the results of the present study show that the teachers of Zone 3 Khyber Pakhtunkhwa preferred and used visual-spatial strategies (mean=12.01) most of the time in their classes for teaching English. The results of the present study suggested that the ELTs of Zone 3 Khyber Pakhtunkhwa did not utilize their strongest multiple intelligences i.e. musical intelligences (9.96) while planning or adopting their teaching strategies. English language teachers preferred naturalistic strategies (mean=12.21), visual-spatial intelligence (mean=12.01), intrapersonal intelligence (mean=11.79), interpersonal intelligence (mean=11.47), verbal linguistic intelligence (mean=11.46), logical-mathematical intelligence (mean=10.87) and bodily-kinesthetic (mean=10.65) respectively in schools of Zone 3 Khyber Pakhtunkhwa to teach the English language to the learners.

It was concluded that the best strategies, the teachers use during classroom and they preferred were affective strategies (mean=19.25), cognitive strategies (mean=18.57), Memory strategies (mean=18.51), social strategies (mean=15.91), compensation strategies (mean=15.23), and meta-cognitive strategies (mean=15.15) respectively.



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