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Mapping the Relationship between Teachers' Language Anxiety in Teaching Science and Students' Motivation at Secondary Schools

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Abstract: Public school teachers are instructed by the government to teach science subjects through English at secondary schools, which is not less than a nightmare for teachers. Their poor language skills enhance their level of anxiety while teaching through English which ultimately affect the student's motivation. This study aimed to investigate the relationship between language anxiety in teaching science and students' motivation at secondary schools. A quantitative research methodology was adopted to conduct this study. A convenient sampling technique was adopted to collect data from secondary school teachers and students. Simple linear regression and independent-sample t-test were applied to analyze data. As to findings, it is identified that teachers' language anxiety has no impact on students' level of motivation. As to language anxiety, both male and female teachers perceived equal level of anxiety. Whereas the difference between boys and girls in relation to their perceived motivation was significant. The discussion highlighted these strange results with the help of available researches.

Key Words: Anxiety, Language, Motivation, Secondary Schools, Teaching Science

Introduction

The English language is inevitable in all societies regardless of their national and local languages. People are speaking English in all domains, from daily life to professional and official and at school (Alamer, 2021). Most of the schools are teaching English which is sometimes obligatory. Teaching in a foreign language is usually difficult for teachers, especially when you are not properly trained for this or your mother tongue is not English. The pressure of speaking a foreign language builds stress on teachers, and they could not give their required performance (Horwitz, Tallon, & Luo, 2010). This begins the stress and anxiety among teachers. Similarly, when it comes to learners, they also feel stress because it is not convenient for them to understand English.

When their teachers are struggling with language learning, how they can be efficient in learning at schools (Alamer, Lee, & Vigentini, 2017), this situation affects both teachers and

students in schools and overall school performance. This can also affect teachers and students in a number of ways; for example, teachers' efficacy, motivation, job satisfaction could get affected (McEown, Noels, & Chaffee, 2014). On the other hand, students can feel many academic and psychological challenges; they demotivated when they could not understand their teachers. They can lose interest in class, and their academic achievement could suffer; their readiness and participation could also suffer due to such an environment in schools (Arabai, 2014; Oteir & Al-Otaibi, 2019). Taking into account this serious issue in public schools, this research intends to map the interplay between teachers' language anxiety and its impact on student's motivation in public schools, Punjab, Pakistan.

Language Anxiety

Language anxiety is including the feeling of stress,

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emotions, fear, and feeling of failure while speaking a foreign language (MacIntyre & Gregersen, 2012). Anxiety is, in fact, a psychological state in which you feel negative emotions and feeling while doing something. Speaking a foreign language in the classroom is challenging when you are not skilled and fluent. This raises the level of stress, and one cannot perform well. Communication difficulties, especially in a foreign language, are quite challenging for school teachers. Communication skills are part of the teachers' training and hallmark of quality teaching in schools (Khan, Khan, Zia-Ul-Islam, & Khan). Communication skills, especially language skills, are crucial in delivering the content to students and engage them in learning processes. [Yasmin, Nadeem, Siddique, and Ali \(2020\)](#) investigated in their research, teachers who do not communicate effectively in the classroom feel anxiety, and due to anxiety, they cannot perform well. It affects the whole process of teaching and learning. A non-confident and confuse teacher cannot handle his/her class efficiently ([Rao, 2019](#)).

[Horwitz et al. \(1986\)](#) highlighted the two key components that create language anxiety. First, "communication apprehension" means a feeling of fear while communicating with others; it can be in the form of a lack of confidence and shyness. Next, "fear of negative evaluation," speakers avoid such situations where they are being observed or evaluated by others. They might have the feeling that they do not satisfy the needs of other people.

Research has also concluded that language anxiety can be skill-specific. There might be a chance that some teachers may experience a certain amount of stress when teaching English in classrooms ([Horwitz, 2001](#); [Pae, 2013](#)). Language anxiety can affect the speakers in all four skills of language, e.g., writing anxiety, speaking anxiety, listening anxiety and reading anxiety. These types of anxiety are being discussed precisely:

Writing Anxiety

Writing is considered to be the most complex and difficult skill in language learning. Writing in language learning comprises various types of rules which need to take care of in writing ([Bailey, 2003](#)). Writing skills can be reinforced in teachers and students through frequent practice. Learners

feel anxiety in writing different assignments; on the other hand, if teachers are not competent and skilled enough, they cannot help their students in writing ([Kara, 2013](#)).

Speaking Anxiety

Speaking is also very important in language learning. Especially in a school context, teachers need to improve their speaking skills, but a lack of these skills could enhance their language anxiety ([Woodrow, 2006](#)). Speaking is not only uttering words but conveying the messages through expression and sentences ([Mukminin, Ali, & Ashari, 2015](#)). However, linguistic competency depends on speakers' language proficiency and ability. Speakers' proficiency and capability is a demanding factor in public schools. Teachers who lack speaking ability feel more anxiety and stress while interacting with their students. Their confidence and competency in subjects matter also get suffered due to their perceived anxiety ([Al Hosni, 2014](#)).

Listening Anxiety

Listening also produces anxiety due to the limited capacity of listeners. Listeners become conscious and remained preoccupied due to their poor performance ([Zhang, 2013](#)). Next to learners, teachers are also conscious and anxious while listening to foreign language ([Liu & Thondhlana, 2015](#)). When their own learning gets affected due to limited capacity, they cannot improve the listening skills of learners, which resultantly affect students' motivation in class ([Hismanoglu, 2013](#)).

Reading Anxiety

The features of reading and listening are sometimes overlapping, but actually, they are different, and both are receptive language skills ([Cutler, 2012](#)). Unlike other language skills, no immediate action is required as to reading skills. However, its importance cannot be denied when teaching in a class, and if he/she could not decode the specific word, sentence or paragraph appropriately, he will feel anxiety, and it will lose his/her confidence in front of learners. Thus, reading skills are of utmost importance in language learning and lacking, which can provoke frustration among readers and listeners ([Sellers, 2000](#)).

Language Anxiety in Pakistani Public Schools

English is the second official language in Pakistan whereas the first language is Urdu. The controversy between these two languages has deep roots in the country (Khan, 2007). Due to this controversy, all the sectors, including education, are suffering. In education, we have two sectors, public and private. Most of the private schools are offering their courses in English, and their medium of instruction is also English; however, in public school, most of the courses are in Urdu, and English is a compulsory subject in all the classes (Khan, Khan, Zia-Ul-Islam, & Khan, 2017). Recently, the government has passed instructions to secondary schools to teach science subjects through English, and the science subjects are also in English now.

In a multilingual society like Pakistan, teachers are struggling between two languages and even with local languages, and due to this, teachers and students both are suffering. The public school teachers were not ready for these initiatives, and in fact, they were not prepared for this (Fareed, Jawed, & Awan, 2018). Teachers usually do not communicate with their students in English, and they mainly depend on Urdu for communication; thus, it became difficult for them to teach science subjects in English (Rao, 2019). This is the reason that even lower-income class is also considering private schools for their children. Private school teachers are more skilful in language and in other skills as compare to public school teachers.

Relationship between Teachers' Language Anxiety and Students' Motivation

This is an established fact that if teachers are not performing up to the mark in classes, the performance of their students might not be up to the level as well. In the case of language anxiety of teachers in public schools, it is often observed their students are not serious in the class, they show less attention, participation, they are also shy and lack confidence, and above all, their performance and motivation also get affected (Tum, 2015).

Motivation consisted of both positive and negative emotions in the learner however it is

identified that negative emotions are more dominating as compared to positive (Gardner, Lalonde, & Moorcroft, 1985). This can be linked to the performance of teachers and learners in the class. If a teacher is struggling and competent enough to speak or teach in English, this will negatively affect the motivation of learners. The relationship between teachers' language anxiety and motivation has been studied in a different context and ended up with significant results. Many studies concluded that Ahmad et al. (2016) anxiety in language skills is a psychological issue that affects both teachers and students in numerous ways. Aydin (2016) also highlighted the factors affecting caused anxiety in language by involving newly appointed teachers in EFL class.

Teachers always wanted to teach effectively and reduce stress among students to engage them in learning effectively. Teachers always try to reduce the negative factors that create anxiety and conduct a variety of activities in the class for productive and healthy learning and also encourage their students to perform well in their classes (Larsen-Freeman & Anderson, 2013).

Research Objectives

The following objectives will drive this study:

1. To map the interplay between teachers' language anxiety and students' motivation at secondary schools.
2. To examine the language anxiety of male and female teachers during a teaching at secondary schools.
3. To identify the motivation of boys and girls studying at secondary schools.

Research Methodology

The study intends to map the interplay between the language anxiety of teachers and students' motivation at secondary schools. A quantitative research methodology was adopted to conduct this study. Due to the pandemic situation, a convenient sampling technique was adopted to collect data from the teachers and students of secondary schools. Existing research instruments were adapted to collect data from 'teachers and students from secondary schools, Punjab, Pakistan. All the data were entered and analyzed in SPSS.

Study Sample

There are in total 720 SST teachers who are engaged in teaching science at secondary schools in district Lahore. Since Lahore is one of the big cities in Punjab where its population is very scattered. It was not possible to reach each school and each teacher; thus, researchers could involve 23 schools in this study. Thus, by putting all hard efforts and resources, only 220 male and female teachers were involved in this study. In total (127) male and (93) female teachers participated in this research. As to the students' sample, all the boys and girls studying in class 10th in these 23 schools were invited to take part in this research. Data were collected from 13 boys and 10 girls schools. Similarly, the sample of students was also restricted to 220 to balance the sample.

Research Instruments

The study applied the existing research instruments. Following research instruments were adapted for data collection: As to measuring the teachers' language anxiety, an existing questionnaire developed by [Horwitz et al. \(1986\)](#) "Foreign Language Classroom Anxiety Scale" (FLCAS), was selected for data collection. There were in total 33 items, but three items were found irrelevant in our school context. So, in total, there were 30 items on the scale. Teachers were asked to rate their opinion on five points Likert scale. In view of measuring students' motivation, English Language Learner Motivation Scale (ELLMS) developed by [Ardasheva et al. \(2012\)](#). This research instrument consisted of 12-items; however, one item was excluded due to a misfit in the local

context. This scale is also designed on a five-point Liker scale. The scale was translated into Urdu so that students can easily understand the statements.

Data Collection

As mentioned above, two existing research instruments were adapted for data collection. Secondary school teachers were invited to give their responses on the language anxiety scale, while students were invited to fill up the motivation scale. Informed consent was obtained from school principals and teachers before data collection. The researcher was presented there in case of answering their questions and comments related to questionnaires. All the ethical formalities were considered to ensure the confidentiality and anonymity of data.

Data Analysis

All the collected data were managed and organized in SPSS for analyses. Before data analysis, data were cleaned and prepared for analysis. Simple linear regression and one-sample t-test were applied to analyze the collected data.

Results

The key aim of this study was to map the relationship between teachers' language anxiety and student' motivation at secondary schools. To achieve the objectives of the study, simple linear regression and a ones-sampled t-test were applied to reach certain findings. At first, descriptive statistics were applied. Table 1 presents the descriptive statistics of the variables

Table 1. Descriptive Statistics

	Mean	Std. Deviation
Language anxiety	100.70	11.84
Motivation	39.35	7.55

N=220

Table 2. Regression Summary

Model	Sum of Squares	df	Mean of Square	f	Sig.
Regression	31.18	1	31.18	.545	.461 ^b
Residual	12467.450	218	57.19		
Total	12498.632	219			

p > .05

Simple regression was applied to analyze the relationship between teachers' language anxiety

and students' motivation. Table 2 explains that the relationship between these two variables was not

significant. Following is the regression equation $F(1,12467.45) = .545$, $aR^2 = .05\%$, $p < .46$.

Table 3. Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	42.56	4.37		9.729	.00
Language anxiety	-.03	.04	-.05	-.7	.46

$p > .05$

Table 3 present the regression coefficient. The regression coefficient of language anxiety. Although the variance between language anxiety and motivation was not strong enough, however, regression coefficients values are significant but negative. This shows language anxiety do not have

an impact on students' motivation.

To see the difference between male and female teachers in view of their perceived anxiety in view of teaching science subjects in English independent sample t-test was applied. Following is the output of this test:

Table 4. T-Test Mapping the Gender differences in view of Perceived Language Anxiety

Group Statistics	Gender	N	Mean	S.D	Std. Error Mean
Anxiety	Male	127	99.37	14.70	1.30
	Female	93	96.70	14.75	1.53

Table 5. Independent sample t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		f	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Motivation	Equal variances assumed	.00	.98	1.328	218	.316	2.66	2.00	-1.29	6.62
	Equal variances not assumed			1.32	197.96	.324	2.66	2.01	-1.29	6.63

Tables 4 and 5 stated the output of the independent sample t-test. The calculated values are significant, $t(218) = .00$, $p = .98$, which means the perceived level of anxiety between male and female teachers at secondary schools was not

different. The mean values are the evidence of this difference, Male= (M= 99.37, SD=14.70) whereas the mean score of females was (M=96.70, SD=14.75).

Mapping the Gender differences in view of Perceived Motivation

To map the difference between male and female

teachers in view of their perceived motivation independent sample t-test was applied.

Table 6. T-Test Mapping the Gender Differences in View of Perceived Motivation

Group Statistics	Gender	N	Mean	S.D	Std. Error Mean
Motivation	Boys	127	38.92	7.19	.63
	Girls	93	39.95	8.01	.83

Table 7. Independent sample t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		f	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Motivation	Equal variances assumed	4.63	.032	-1.0	218	.316	-1.03	1.03	-3.06	.99
	Equal variances not assumed			-.98	185.42	.324	-1.03	1.04	-3.10	1.03

* $p > 0.05$

Tables 6 and 7 described the results of the independent sample t-test. The calculated values are significant, $t(218) = 4.63$, $p = .03$, which means the perceived level of motivation between boys and girls are different. The mean values are the evidence of this difference ($M = 38.92$, $SD = 7.19$), whereas the mean score of girls was ($M = 39.95$, $SD = 8.01$).

Discussion and Conclusion

The findings of this study showed there is no impact of language anxiety of teachers on students' motivation at public schools. However, we could not find any specific study conducted in teaching science subjects; however, some comparable studies were found. Our study results can be compared with the study findings of [Bernaus and Gardner \(2008\)](#); they found that teachers' motivation in view of language learning and teaching could enhance the level of motivation of their students, which is in line with our study findings. There is another study conducted by [Liu and Cheng \(2014\)](#) in a language learning context, the fear of speaking English and being evaluated affect the level of performance and motivation among students, and the same is the case with teachers while they are teaching in classrooms. This can be linked to our study findings conducted in view of teachers' point of view.

As to comparing the level of anxiety among male and female teachers, we have found the same level of anxiety. [Capan and Simsek \(2012\)](#) conducted a study to compare the gender differences, and they have explored female teachers feel more anxiety as compared to male teachers, which is in contrast to our study findings. However, there could be certain reasons for these findings, and it is very unlikely to generalize this finding. As to comparing the motivation level of students, our findings shows that girls are more motivated to learn through English as compared to boys, which is in line with the study findings of [Ghazvini and Khajehpour \(2011\)](#); [Shaaban and Ghaith \(2000\)](#), who conclude that female students feel more motivated in language class than male students.

Limitations and Directions for Future Research

The following limitations need to be highlighted in view of future researches. First, the study sample was very not adequate to apply linear regression and to find a certain level of variance in data. Future researchers can expand this study to a large scale and collect data by involving maximum public schools.

Second, we have adapted the existing research instruments, which might not be suitable in the local context, or maybe their psychometric

properties got affected due to adaptation. In view of students' motivation scale, we have translated the scale into Urdu. This might affect the real purpose of the instrument, and this ultimately contributes to affecting our results. Future researches could focus on developing such instruments to cater for the local needs.

As to studying teachers' language anxiety, the qualitative methodology could be more appropriate to get in-depth data about this phenomenon. Future research can take into account this aspect to get better and productive results. Future research could also add some other variables to traces the effects of teachers' anxiety, e.g., students' achievement, class participation and their level of attention in class etc.

References

- Ahmed, M. A. E. A. S. (2016). The effect of a flipping classroom on writing skill in English as a foreign language and students' attitude towards flipping. *US-China Foreign Language*, 14(2), 98-114.
- Al Hosni, S. (2014). Speaking difficulties encountered by young EFL learners. *International Journal on Studies in English Language and Literature (IJSELL)*, 2(6), 22-30.
- Alamer, A. (2021a). Basic psychological needs, motivational orientations, effort, and vocabulary knowledge: a comprehensive model. *Stud. Second Lang. Acquis.* doi: 10.1017/S027226312100005X
- Alamer, A., Lee, J., and Vigentini, L. (2017). "The relationship of motivation and emotion with second language learning," in Proceedings of the Applied Linguistics Conference (ALANZ /ALAA/ALTAANZ), Auckland.
- Arabai, F. (2018). Learning English in Saudi Arabia. *English as a foreign language in Saudi Arabia: New insights into teaching and learning English*, 102-119.
- Ardasheva, Y., Tretter, T. R., & Kinny, M. (2012). English language learners and academic achievement: Revisiting the threshold hypothesis. *Language Learning*, 62(3), 769-812.
- Aydin, S. (2016). An Analysis of the Relationship between High School Students' Self-Efficacy, Metacognitive Strategy Use and Their Academic Motivation for Learn Biology. *Journal of Education and Training Studies*, 4(2), 53-59.
- Bailey, S. (2003). Academic writing: A practical guide for students. *Psychology Press*.
- Bernaus, M., & Gardner, R. C. (2008). Teacher motivation strategies, student perceptions, student motivation, and English achievement. *The Modern Language Journal*, 92(3), 387-401.
- Bernaus, M., Wilson, A., & Gardner, R. C. (2009). Teachers' motivation, classroom strategy use, students' motivation and second language achievement.
- Capan, S. A., & Simsek, H. (2012). General foreign language anxiety among EFL learners: A survey study. *Frontiers of language and teaching*, 3(11), 116-124.
- Cutler, A. (2012). Native listening: Language experience and the recognition of spoken words. *Mit Press*.
- Dewaele, J. M., Chen, X., Padilla, A. M., & Lake, J. (2019). The flowering of positive psychology in foreign language teaching and acquisition research. *Frontiers in psychology*, 10, 2128.
- Fareed, M., Jawed, S., & Awan, S. (2018). Teaching English language at SSC level in private non-elite schools in Pakistan: Practices and problems. *Journal of Education and Educational Development*, 5(1), 80-95.
- Gardner, R. C., Lalonde, R. N., & Moorcroft, R. (1985). The role of attitudes and motivation in second language learning: Correlational and experimental considerations. *Language learning*, 35(2), 207-227.
- Ghazvini, S. D., & Khajehpour, M. (2011). Attitudes and motivation in learning English as Second Language in high school students. *Procedia-social and behavioral sciences*, 15, 1209-1213.
- Hismanoglu, M. (2013). Does English language teacher education curriculum promote CEFR awareness of prospective EFL teachers? *Procedia-Social and Behavioral Sciences*, 93, 938-945.
- Horwitz, E. K. (2001). Language anxiety and achievement. *Annual review of applied linguistics*, 21, 112-126.
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern language journal*, 70(2), 125-132.
- Horwitz, E. K., Tallon, M., and Luo, H. (2010). "Foreign language anxiety," in *Anxiety in Schools: The Causes, Consequences, and Solutions for Academic Anxieties*, ed. J. C. Cassady, (New York, NY: Peter Lang Inc), 95-115
- Kara, S. (2013). Writing anxiety: A case study on students' reasons for anxiety in writing classes. *Anadolu Journal of Educational Sciences International*, 3(1), 103-111.
- Khan, A., Khan, S., Zia-Ul-Islam, S., & Khan, M. (2017). Communication Skills of a Teacher and Its Role in the Development of the Students' Academic Success. *Journal of Education and Practice*, 8(1), 18-21.
- Khan, H. A. (2007). A needs analysis of Pakistani state boarding schools secondary level students for adoption of communicative

- language teaching. *MA Diss. School of Arts & Education of Middlesex University, London.*
- Larsen-Freeman, D. (2013). Transfer of learning transformed. *Language Learning*, 63, 107-129.
- Liu, H. J., & Cheng, S. H. (2014). Assessing Language Anxiety in EFL Students with Varying Degrees of Motivation. *Electronic journal of foreign language teaching*, 11(2).
- Liu, M., & Thondhlana, J. (2015). A study of Chinese University EFL learners' foreign language listening anxiety, listening strategy use and listening performance. *Indonesian JELT*, 10(1), 33-57.
- McEown, M. S., Noels, K. A., and Chaffee, K. E. (2014). "At the interface of the socio-educational model, self-determination theory and the L2 motivational self-system models," in *The Impact of Self-Concept on Language Learning*, eds K. Csizér, and M. Magid, (Bristol: Multilingual Matters), 19-50. doi: 10.21832/9781783092383-004
- Mukminin, A., Ali, R. M., & Ashari, M. J. F. (2015). Voices from Within: Student Teachers' Experiences in English Academic Writing Socialization at One Indonesian Teacher Training Program. *Qualitative Report*, 20(9).
- Oteir, I. N., & Al-Otaibi, A. N. (2019). Foreign Language Anxiety: A Systematic Review.
- Pae, T. I. (2013). Skill-based L2 anxieties revisited: Their intra-relations and the inter-relations with general foreign language anxiety. *Applied linguistics*, 34(2), 232-252.
- Rao, P. S. (2019). The importance of teaching language skills to the second or foreign language learners of english: A comprehensive study. *ACADEMICIA: An International Multidisciplinary Research Journal*, 9(4), 6-19.
- Sellers, V. D. (2000). Anxiety and reading comprehension in Spanish as a foreign language. *Foreign Language Annals*, 33(5), 512-520.
- Shaaban, K. A., & Ghaith, G. (2000). Student motivation to learn English as a foreign language. *Foreign Language Annals*, 33(6), 632-644.
- Tum, D. O. (2015). Foreign language anxiety's forgotten study: The case of the anxious preservice teacher. *Tesol Quarterly*, 49(4), 627-658.
- Woodrow, L. (2006). Anxiety and speaking English as a second language. *RELC journal*, 37(3), 308-328.
- Yasmin, T., Nadeem, M., Siddique, G. K., & Ali, M. S. Z. (2020). The Effect of Teachers' Language Speaking Anxiety on their Performance in English. *Review of Education, Administration & LAW*, 3(2), 285-291.
- Zhang, X. (2013). Foreign language listening anxiety and listening performance: Conceptualizations and causal relationships. *System*, 41(1), 164-177.