

How EFL teachers' subject matter knowledge matters for students' academic performance

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ABSTRACT

Keywords:

EFL setting; subject matter knowledge; students' academic performance; secondary schools; quantitative study

High subject matter knowledge is essential for instructors to obtain an efficient educational approach since they play a significant role in the successful achievement of any nation's educational objectives. Therefore, by using a quantitative approach, this study was conducted to investigate the influence that teachers' subject matter knowledge plays on the academic achievement of their students. All secondary school students in Karachi were selected by a purposive sampling, and 347 individuals took part in this study. The research was conducted using a descriptive survey research methodology, and the primary method for gathering data was through the use of questionnaires. The information was then put through a series of statistical tests, both descriptive and inferential. The results of the study showed that teachers had a sufficient degree of subject matter expertise, which has a strong association with the academic achievement of students in an EFL context. As a result, the study primarily proposes that language teachers should be prepared with sufficient and up-to-date subject matter knowledge, in addition to the ongoing specialized trainings that are necessary to meet the requirements.

INTRODUCTION

Due to the country's multilingual and multiethnic population, Pakistan is home to a wide variety of languages, with 65 of them now in use (Rahman, 2015). Since Pakistan's independence, the state has maintained Urdu as its official language. On the other hand, English is recognized as an official language in Pakistan; consequently, it holds the position of preeminence throughout all spheres of authority, including the executive branch, the judiciary, the armed forces, education, and the media. For that reason, being able to speak English is regarded as an identification card to higher social and economic status, privilege, and respect in Pakistan

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(Mahboob, 2017; Coleman & Capstick, 2012). Because of its advantageous location with respect to both the approach and the holding, it is nearly hard to deny the significance of this factor when it comes to finding work, whether in the public or private sector (Fareed et al., 2018; Channa, 2017).

The dissemination of knowledge in scientific and technological fields is primarily done in English (Islam et al., 2013). Learning English is becoming increasingly important as the number of jobs that require proficiency in the language continues to rise. According to Ali and Hamid, (2020), The ability to communicate in English is seen to be crucial for surviving in the global market. As a result, the necessity of acquiring English language skills has increased even further. In addition, English acquisition is not just a need for many professional careers in Pakistan, but also given a position as country's official language (Haidar, 2019; Rahman and Singh 2020). This is because English serves as a form of screening for the vast majority of employment opportunities in the country (Kirkpatrick & Liddicoat, 2017). In a similar vein, in higher education institutions, instruction is provided mostly in the English language, which not only assists students in evaluating local and worldwide resources but also facilitates personal development and professional advancement (Sarwar et al., 2014; Fareed et al., 2019). Someone who is unable to communicate in English is regarded as having a low level of education because they lack the linguistic capital that is highly valued in the market (Tamim, 2014). In the context of Pakistan, it has been observed that students who exhibit excellent English language skills have a much easier time gaining admission to prestigious educational institutions than their counterparts who are unable to communicate effectively in English due to the demand and significance of the English language (Zeeshan, 2013).

On the other hand, the most significant issue is associated with the level of English language proficiency possessed by educators. Studies have shown that teachers have a low speaking ability and confidence level on average (Khan & Khan, 2016); unskilled teachers and inadequate resources (Akram, 2020); and a lack of teachers' professional development programs (Akram & Yang, 2021). In addition, many educators are of the opinion that delivering lessons in the target language may cause students to experience anxiety and bring up concerns about their abilities to speak and listen in that language (Rasheed et al., 2017). Students often experience anxiety when it comes to speaking in a second language learning environment (Akram et al., 2019). Although increasing the level of learning satisfaction among EFL students is seen to be extremely important for maintaining students' academic interests (Khanam et al., 2022) and achieving the highest possible academic output (Abdelrady & Akram, 2022).

At the same time, a solid grasp of the material being taught is an absolutely necessary quality for an effective, professional, and capable educator to have. The instructor who has a strong grasp of the material will be able to present the students in the classroom with specific information as well as a concise and understandable explanation of the concepts (Moats, 2014). It is vital to have an awareness of key concepts, examination tools and structures, as well as the ramifications of these things, in order to organize lessons for the class. When teachers have a firm grasp of the material, their authority increases, and they open up more opportunities for their students' artistic development. When teachers are skilled at providing clear explanations of their teachings, there is a greater chance that their pupils will comprehend what they are learning. The content expertise that teachers possess is the primary factor that contributes to their authority and status as an asset in their roles as educators (Kahn-Horwitz, 2016).

Therefore, teachers need to have solid subject matter expertise in order to construct a credible relationship between the curricula of the many disciplines that are being taught in the class (Kelcey, 2011). In addition, by utilizing integrated lesson planning, educators are able to impart genuine information to their pupils, which not only fosters innovative thought but also improves the quality of students' educational experiences (Goldsmith, et al., 2014). In addition to the teacher's mastery of the material being taught, the manner in which the instructor teaches also has a significant impact on the students' progress. Students learning English as a foreign language who are instructed by teachers who have a higher level of education and experience in the field of the subject matter perform significantly better than those who are instructed by teachers who have a level of education and experience that is significantly lower (Saeed & Akbar, 2021). At the same time, English learning is being struggled at the national level and found unsatisfactory results among other basic competencies, while the learning opportunities in the rural areas are still limited (ASER, 2020). This indicates that further inquiry into this potential outcome is required as soon as possible. As a result, the reason for this study was to evaluate the relationship between a teacher's subject matter knowledge and the academic achievement of their pupils in a setting where English as a Foreign Language is being taught.

Research Objectives

1. To find out the level of EFL teachers' subject matter knowledge in the secondary schools of Karachi.
2. To investigate the correlation between teachers' subject matter knowledge and academic achievements of secondary school students of Karachi.

METHODOLOGY

Research design

In order to investigate whether or not there is a correlation between teachers' subject matter knowledge and the academic achievement of secondary school students, a quantitative design was chosen because it was the most suitable framework to represent results via numerical representation. The students' grades were used as the primary measure of academic success (Watson, 2015).

Participants

The population of the study consisted of all of the pupils enrolled in secondary schools in the city of Karachi. The researcher handed out questionnaires to each and every school on their own initiative, and then used the technique of purposive sampling to collect data, as this method enables a researcher to select a specific demographic of respondents to survey (Campbell et al.,2020). In this regard, questionnaires (as a tool for data collection) were handed out to 450 students in a targeted manner; however, only 347 students filled out the surveys in their whole.

Survey Instrument

The data was collected from the students using a questionnaire that did not allow for open-ended responses. The independent variable of the study was investigated using a subject matter knowledge scale (to investigate the level of teachers' subject matter knowledge), which was adopted from Peerzada and Jabeen (2014). The academic achievement of the students was investigated using the English scores they received on their most recent exams. On a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree," the responses to each and every item on the subject matter knowledge scale for instructors were compiled.

Pilot Study and Reliability of the Instrument

An expert from the English department of the aforementioned university examined the questionnaire's face validity; however, the expert's name was withheld in order to protect their anonymity. Following this, the pilot study was carried out with a total of fifty students, which paved the way for the reliability of the questionnaire. The results of the calculation of the Cronbach Alpha Reliability Coefficient for each of the items are presented in table 2 below. The Cronbach Alpha Coefficients values of all of the items on the questionnaire, which were strong enough collectively (Brown, 2002), i.e., 0.71 overall, to carry the real study.

Table 1. Reliability of the Questionnaire

Variable	No of Items	Standardized Alpha Value	Alpha Value
Teachers' subject matter knowledge	5	0.73	0.71

DATA ANALYSIS

All of the data that were gathered were examined using a variety of descriptive and inferential statistical tests, such as the mean, the standard deviation, and the analysis of variance (ANOVA).

Research Objective 1

The use of descriptive statistical tests, specifically the mean and standard deviation, allowed for an evaluation of the level of subject matter knowledge possessed by teachers. The average score of all of the questions on the survey was greater than 3, specifically 3.33. (see table 2). The fact that the mean value was higher than three suggests that teachers exhibit satisfactory level of subject matter knowledge, as the mean value was greater than 3 (Afifi et al., 2011).

Table 2. Descriptive Analysis

S. No.	Items	Mean	SD
1.	My English teacher provides a clear and comprehensive explanation of the topic by presenting it from a variety of angles.	3.2	1.2
2.	The English subject is made relatable to real-world situations.	3.4	1.4
3.	My teacher seems to know a lot about the English subject.	3.6	1.5
4.	My instructor employs a variety of strategies to increase students' English related comprehension.	3.3	1.3
5.	My teacher has a deep understanding of how to explain the English subject to students.	3.4	1.4
		3.3	1.3

Research Objective 2

Their English score percentages were divided into three groups, namely, 60% and less than 60% (graded as poor), greater than 70% (graded as fair), while 80% and greater than 80% (graded as good) shown in table 3, in order to investigate the difference between the teachers' subject matter knowledge in terms of their students' academic achievement. This was done in order to determine whether or not there was a correlation between the two. According to the findings of the Anova test, there is a discernible gap between the grades of students in terms of the subject matter knowledge that their teachers possess in the relevant subject area. The significant value that was achieved was less than .05, which is written out as 0.000. This indicated that the difference is statistically significant.

Table 3. ANOVA examination

	N	Mean	SD	F	Sig
≥80%	156	3.5	0.7	413	.000
≥70%	143	3.2	0.4		
≤ 60%	48	2.5	0.7		

Since, Tukey's range test alternatively referred to (HSD) honestly significant difference test, is a single step statistical test help acquire mean comparison across all possible pairs of certain

information of respondents. Therefore, Tukey's (HSD) Post-hoc test was conducted in order to determine which possible grade combinations had the highest difference in scores (as shown in Table 4). Tukey's honestly significant difference test helps to measure up to the means of all possible pairs of grades, so conducting Tukey's (HSD) Post-hoc test was done in order to find out which possible grade combinations had the most variance between them (as shown in Table 4). This was done so that we could determine which possible grade combinations had the most differences between them (Abdi & Williams, 2010). The findings indicate that there are notable distinctions to be found between each of the three categories. It was revealed that the subject matter knowledge was considerably higher in those teachers whose students had earned fair and good grades than the students who acquired lower grades.

Table 4 Post-hoc test

Test	Sig
≥80% compared to ≥70%	.001 [(≥80%) > (≥60%)]
≥80% compared to ≤ 60%	.01 [(≥80%) > (≤70%)]
≥70% compared to ≤ 60%	.02 [(≥70%) > (≤60%)]

DISCUSSION

This study aimed to accomplish two objectives. Firstly, the study investigated the level of EFL teachers' subject matter knowledge in the secondary schools of Karachi by means of subject matter knowledge scale. Secondly, we explored the role of teachers' subject matter knowledge in students' academic achievements in EFL settings across all secondary schools in Karachi.

The findings of descriptive statistical tests indicated that English as a Foreign Language teachers at secondary schools in Karachi possessed a level of subject matter knowledge that was sufficient to meet expectations. This finding is in line with the findings of Van Loi (2021), who found that the majority of teachers surveyed reached the required English proficiency requirements during the course of the survey. This finding shows consistency with their findings. Because of this, it is absolutely necessary for the relevant educational authorities to evaluate the level of subject matter expertise possessed by prospective instructors before hiring them. In addition, all educators' expertise ought to be brought up to date by presenting them with obligatory opportunities for professional development training (Akram et al., 2020).

With regard to the second objective, the findings of the study revealed a substantial association between the academic accomplishment of students and the subject matter knowledge that their teachers possessed. Saeed and Akbar (2021), who made the identical discovery, came upon a finding that was comparable to what they discovered. They came to the conclusion that the professional abilities of English teachers had a substantial bearing on the students' English results at the BA level. In a manner that is quite analogous, Ansah et al. (2020) came to the

conclusion that the students' growth had been significantly aided by the knowledge that their professors had imparted to them. Therefore, it is essential for educators to acquire the knowledge they require in order to enhance both the teaching and the learning processes.

CONCLUSION

It is clear, based on the numerous statistical analyses of the data that were performed, that the performance of the students is strongly dependent on the level of subject matter knowledge possessed by the teachers. In addition to all of this debate, it is expected of instructors to seek out the necessary knowledge that is required in the teaching profession. When students have access to relevant information, their academic performance has a tendency to improve. It is essential for the development of teachers to receive initial training as well as ongoing training. Because of this training, they would be able to obtain information that is useful for both teaching and learning.

REFERENCES

- Abdi, H., & Williams, L. J. (2010). Principal component analysis. *Wiley interdisciplinary reviews: computational statistics*, 2(4), 433-459.
- Abdelrady, A. H., & Akram, H. (2022). An Empirical Study of ClassPoint Tool Application in Enhancing EFL Students' Online Learning Satisfaction. *Systems*, 10(5), 154.
- Afifi, A., May, S., & Clark, V. A. (2011). Practical multivariate analysis. Chapman and Hall/CRC.
- Akram, H., Yang, Y., Ahmad, N., & Aslam, S. (2020). Factors Contributing Low English Language Literacy in Rural Primary Schools of Karachi, Pakistan. *International Journal of English Linguistics*, 10(6), 335-346.
- Akram, H., & Yang, Y. (2021). A critical analysis of the weak implementation causes on educational policies in Pakistan. *International Journal of Humanities and Innovation (IJHI)*, 4(1), 25-28.
- Akram, H. (2020). Education governance in Pakistan: A critical analysis of challenges. *Journal of Social Sciences Advancement*, 1(1), 38-41.
- Akram, H., Junaid, M., & Yang, Y. (2019). Relationship between Self-efficacy and Chinese Language Speaking Anxiety of International Students at Northeast Normal University. *Journal of Education and Practice*, 10(2), 26-32.
- Ali, M. M., & Hamid, M. O. (2020). English for human capital development. In *The Routledge handbook of English language education in Bangladesh* (pp. 369-381). Routledge.
- Ansah, J. K., Mensah, N., & Wilmot, E. M. (2020). Influence of Subject Matter Knowledge on Students' Elective Mathematics Performance in Senior High Schools in Ghana: Does Teaching Experience Matter?. *American Journal of Education and Learning*, 5(1), 87-95.
- ASER. (2020). Annual Status of Education Report: ASER Pakistan 2019. Retrieved from <http://asERPakistan.org/report>
- Brown, J. D. (2002). The Cronbach alpha reliability estimate. *JALT Testing & Evaluation SIG Newsletter*, 6(1).
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., ... & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of research in Nursing*, 25(8), 652-661.

- Channa, L. A. (2017). English in Pakistani public education: Past, present, and future. *Language Problems and Language Planning*, 41(1), 1-25.
- Coleman, H., & Capstick, A. (2012). *Language in education in Pakistan: Recommendations for policy and practice*. Islamabad: British Council.
- Fareed, M., Ashraf, A., & Mushtaque, S. (2019). Medium of Instruction in Education: Perceptions of Teachers and Students from Pakistani School, College and University. *FWU Journal of Social Sciences*, 13(3), 134-143.
- 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.
- Goldsmith, L. T., Doerr, H. M., & Lewis, C. C. (2014). Mathematics teachers' learning: A conceptual framework and synthesis of research. *Journal of mathematics teacher education*, 17(1), 5-36.
- Haidar, S. (2019). The role of English in developing countries: English is a passport to privilege and needed for survival in Pakistan. *English Today*, 35(3), 42-48.
- Islam, M., Lamb, M., & Chambers, G. (2013). The L2 motivational self system and national interest: A Pakistani perspective. *System*, 41(2), 231-244.
- Kahn-Horwitz, J. (2016). Providing English foreign language teachers with content knowledge to facilitate decoding and spelling acquisition: a longitudinal perspective. *Annals of dyslexia*, 66(1), 147-170.
- Khanam, L., Akram, H., & Kamran, M. (2022). Parental Expectations and Students' Academic Interests: A Case Study of the Islamia University of Bahawalpur, Pakistan. *Pakistan Journal of Social Sciences (PJSS)*, 42(1), 61-70.
- Kelcey, B. (2011). Assessing the effects of teachers' reading knowledge on students' achievement using multilevel propensity score stratification. *Educational Evaluation and Policy Analysis*, 33(4), 458-482.
- Khan, T. J., & Khan, N. (2016). Obstacles in learning English as a second language among intermediate students of districts Mianwali and Bhakkar, Pakistan. *Open Journal of Social Sciences*, 4(02), 154.
- Kirkpatrick, A., & Liddicoat, A. J. (2017). Language education policy and practice in East and Southeast Asia. *Language Teaching*, 50(2), 155-188.
- Mahboob, A. (2017). English medium instruction in higher education in Pakistan: Policies, perceptions, problems, and possibilities. *English medium instruction in higher education in Asia-Pacific*, 71-91.
- Moats, L. (2014). What teachers don't know and why they aren't learning it: Addressing the need for content and pedagogy in teacher education. *Australian Journal of learning difficulties*, 19(2), 75-91.
- Peerzada, S. M., & Jabeen, M. (2014). Impact of teachers' subject matter knowledge and behaviour on students' performance. *Journal of Education & Social Sciences*, 2(2), 154-162.
- Rahman, M. M., & Singh, M. K. M. (2020). Language ideology of English-medium instruction in higher education: A case study from Bangladesh. *English Today*, 36(4), 40-46.
- Rahman, T. (2015). *A history of Pakistani literature in English, 1947-1988*. Oxford University Press.
- Rasheed, S., Zeeshan, M., & Zaidi, N. A. (2017). Challenges of teaching English language in a multilingual setting: An investigation at government girls secondary schools of Quetta, Baluchistan, Pakistan. *International Journal of English Linguistics*, 7(4), 149-157.
- Saeed, A., & Akbar, R. A. (2021). Relationship of Teachers' Professional Skills and Students' Achievement in English at BA Level. *Bulletin of Education and Research*, 43(1), 31-44.

- Sarwar, M., Alam, M., Hussain, S., Shah, A. A., & Jabeen, M. (2014). Assessing English speaking skills of prospective teachers at entry and graduation level in teacher education program. *Language Testing in Asia*, 4(1), 1-9.
- Tamim, T. (2014). The politics of languages in education: Issues of access, social participation and inequality in the multilingual context of Pakistan. *British Educational Research Journal*, 40(2), 280-299.
- Van Loi, N. (2021). Vietnamese high-school teachers' perceptions of TPACK in teaching English as a foreign language. *European Journal of Education Studies*, 8(4).
- Watson, R. (2015). *Quantitative research*. *Nursing Standard*, 29(31), 44–48
<https://doi.org/10.7748/ns.29.31.44.e8681>
- Zeeshan, M. (2013). *Pakistani government secondary school teachers' and students' attitudes towards communicative language teaching and grammar translation in Quetta, Balochistan* (Doctoral dissertation, California State University, Los Angeles).