PhysicalEducation,HealthandSocialSciences

https://journal-of-social-education.org E-ISSN:2958-5996

P-ISSN:2958-5988

Exploring the Effects of Task Design and Corrective Feedback on ESL Writing Complexity and Accuracy

Ayesha Ejaz[1], Muhammad Noman Noorani[2], Ujala Wasim[3]

[1] English Language Instructor, Faizan Global Relief Foundation Gmail: ayeshaejaz381@gmail.com
[2] Lecturer, Department of General Education, Bahria University Health Sciences Campus, Karachi Email: nomannoorani.buhsck@bahria.edu.pk
[3] Lecturer, Department of Education Faculty of Social Sciences and Humanities, Hamdard University, Karachi Email: ujala.wasim@hamdard.edu.pk

DOI: https://doi.org/10.63163/jpehss.v3i3.557

Abstract

Task-based language teaching (TBLT) has gained considerable importance in the field of language education in Pakistan. However, certain dimensions of TBLT, such as the interaction between task design features, written corrective feedback (WCF), and learners' performance, have not been adequately explored in the local context. To address this gap, the present study investigates how task complexity, task conditions, and their interaction influence Pakistani ESL learners' improvement through WCF. A total of 150 university students were purposively selected and assigned to three experimental groups and one control group. Participants in the experimental groups were given a pretest, followed by three treatment sessions where they completed simple or complex writing tasks either individually or collaboratively. They received written feedback on their performance and later completed two posttests. The control group, in contrast, received the pretest, posttest, and regular classroom instruction without WCF. Statistical analyses revealed that task implementation conditions had a more significant impact than task complexity on learners' gains from WCF. However, the interaction between the two variables did not significantly affect students' writing complexity and accuracy. These findings provide partial support for Skehan's Tradeoff Hypothesis and Vygotsky's sociocultural theory of language development. The study discusses implications for English language instructors and curriculum designers in Pakistani higher education institutions.

Keywords: Task Design, Corrective Feedback, ESL Writing Complexity, Accuracy

Introduction

Developing writing skills in English is one of the most challenging aspects for Pakistani ESL learners as it requires both linguistic and communicative competence. Classroom activities that engage learners in negotiation of meaning are considered effective for enhancing writing performance (Carson, 2001). Task-based language teaching (TBLT), a learner-centered approach, emphasizes meaning-focused activities and interactive tasks to support second language acquisition (SLA) (Skehan, 1996; Van den Branden, 2006). While TBLT has gained theoretical and empirical support globally, its application in L2 writing, particularly in Pakistan, remains underexplored. Most TBLT

studies have focused on oral production, neglecting the potential of writing tasks to foster second language learning (Byrnes & Manchon, 2014).

Task design features such as task complexity and implementation conditions are critical in shaping learners' performance. Manipulating task complexity, for example, by increasing decision-making elements, or changing task conditions, such as individual or collaborative work, can significantly influence written output (Michel et al., 2007). However, limited research has investigated how these factors interact with written corrective feedback (WCF) in improving learners' writing skills in ESL contexts like Pakistan (Rahimi & Zhang, 2017).

This study aims to fill this gap by examining how task complexity and task conditions mediate the effect of WCF on the writing performance of Pakistani ESL learners. By focusing on writing complexity and accuracy, the research seeks to provide insights for language teachers, curriculum designers, and SLA researchers to enhance writing instruction in Pakistani classrooms.

Literature Review

Task-based language teaching (TBLT) research often examines how task design variables, such as task complexity, influence learners' language output. Two dominant theoretical models—Skehan's Tradeoff Hypothesis (1998, 2009) and Robinson's Cognition Hypothesis (2001, 2003, 2009)—offer different perspectives. Skehan argues that cognitively complex tasks cause tradeoffs between accuracy and complexity due to limited attentional resources, while Robinson suggests that increased task complexity can promote simultaneous gains in accuracy and complexity when attentional resources are efficiently managed.

Empirical studies provide mixed findings. Ishikawa (2007) found that complex tasks improved accuracy and complexity but reduced fluency, while Frear and Bitchener (2015) reported negative effects on syntactic complexity but positive effects on lexical complexity. Revesz et al. (2017) observed improvements in lexical and syntactic complexity without affecting fluency.

Task conditions also significantly affect performance. Research shows that providing more planning time (Ellis & Yuan, 2004; Ong & Zhang, 2010) and collaborative writing (Storch, 2016; Bueno-Alastuey et al., 2022) enhances learners' fluency and complexity. Collaborative tasks allow learners to negotiate meaning, share knowledge, and process feedback more deeply (Swain, 1985; Donato, 1994).

The role of written corrective feedback (WCF) within TBLT has received limited attention, particularly in writing tasks. Studies (e.g., Kassim & Luan, 2014; Mujtaba et al., 2021) suggest that collaborative processing of WCF raises learner awareness of linguistic gaps and improves grammatical accuracy.

Most previous studies have focused on oral production, leaving a gap in understanding how task complexity, task conditions, and WCF interact in written performance, especially in ESL contexts like Pakistan. This study addresses these gaps by exploring how these factors affect Pakistani learners' writing complexity and accuracy.

Research questions

1. What is the combined effect of task complexity, task condition, and written corrective feedback (WCF) on the accuracy of Pakistani ESL undergraduates' writing performance?
2. What is the combined effect of task complexity, task condition, and written corrective feedback (WCF) on the complexity of Pakistani ESL undergraduates' writing performance?

Objectives

1 To examine the combined effect of task complexity, task condition, and written corrective feedback (WCF) on the accuracy of Pakistani ESL undergraduates' writing performance.
2 To investigate the combined effect of task complexity, task condition, and written corrective feedback (WCF) on the complexity of Pakistani ESL undergraduates' writing performance.

Significance of the Study

This study is significant as it explores how task complexity, task conditions, and written corrective feedback (WCF) interact to influence the writing performance of Pakistani ESL undergraduates. Writing skills are often underdeveloped among Pakistani learners due to traditional grammar-focused teaching methods. By integrating TBLT principles with WCF, this research provides insights into effective ways of improving accuracy and complexity in learners' writing. The findings will help language teachers design better writing tasks and provide meaningful feedback to enhance students' linguistic and communicative competence. Furthermore, it will guide curriculum developers in creating task-based syllabi suitable for Pakistani classrooms and contribute to the limited body of local research on TBLT and L2 writing.

Research Methodology

Design

This study employed a pretest-posttest-delayed posttest experimental design to investigate the combined effects of task complexity, task condition, and written corrective feedback (WCF) on the writing accuracy and complexity of Pakistani ESL undergraduates. Task complexity and task condition, each with two levels, along with WCF, served as the independent variables. The dependent variable was learners' improvement in writing accuracy and complexity across the three testing stages.

Participants were divided into five groups: four experimental groups and one control group. The experimental groups completed either simple or complex writing tasks individually or collaboratively and received WCF on their performance. In contrast, the control group performed similar tasks but did not receive feedback on the accuracy or complexity of their written texts.

Participants

The study involved 150 Pakistani undergraduate ESL learners enrolled in a 12-week academic writing course at a university in Karachi. Six intact classes were selected, and Longman Academic Writing Series (Book 4) was used as the main teaching material. Data collection took place over 10 sessions across 9 weeks, held after regular class hours. To ensure homogeneity, participants took the Nelson English Proficiency Test and a writing pretest; students scoring more than one standard deviation above or below the mean were excluded.

Procedure

Participants first took the Nelson English Proficiency Test and a writing pretest. Eligible students (N=150) were randomly divided into four experimental groups and one control group. Experimental groups completed writing tasks varying in complexity (simple/complex) and condition (individual/collaborative) and received indirect,

unfocused written corrective feedback (WCF). Control group students followed the regular syllabus without receiving WCF.

Over three weeks, experimental groups had treatment and feedback sessions, while the control group performed standard writing tasks. A posttest and a delayed posttest were conducted to assess writing accuracy and complexity.

Data Coding

Accuracy was measured as the proportion of error-free clauses to total clauses, excluding spelling, punctuation, and capitalization errors that did not alter meaning (Ellis & Yuan, 2004). Syntactic complexity was assessed using the mean number of clauses per T-unit, following Young's (1995) definitions.

The primary researcher coded and scored all texts, while an independent expert double-coded 15% of the data to ensure reliability. Inter-coder and inter-rater reliability coefficients were 0.91 and 0.93, respectively.

Data Analysis

Data were analyzed using SPSS 25. Normality was confirmed through Kolmogorov–Smirnov tests and visual inspections (histograms, Q-Q plots, boxplots), allowing the use of parametric tests. Descriptive statistics were computed for each group's writing performance across pretest, posttest, and delayed posttest.

To check group equivalence at baseline, two one-way ANOVAs were run on accuracy and complexity scores. Separate one-way ANOVAs compared group performances across testing stages, followed by post-hoc tests for pairwise comparisons. Finally, two two-way ANOVAs examined the interaction effects of task complexity, task condition, and WCF on writing outcomes. Significance was set at $p < .05$, and effect sizes were interpreted using Cohen's (1988) benchmarks: small ($\eta^2 = .01$), medium ($\eta^2 = .06$), and large ($\eta^2 = .14$).

Results

The Effect of Task Variables on Writing Accuracy

To address the first research question, descriptive statistics (means and standard deviations) were calculated for the accuracy scores of participants' written texts. As shown in Table 2, participants who completed the simple task collaboratively and received written corrective feedback (WCF) achieved the highest mean scores in the posttests. In contrast, participants in the control group, who did not receive feedback, demonstrated the lowest accuracy scores across all testing stages

Table 1
Descriptive Statistics for Accuracy Scores in Pretest, Posttest, and Delayed Posttest

Group	n	Test	M	SD
Simple Individual	30	Pretest	0.53	0.09
		Posttest	0.69	0.10
		Delayed Posttest	0.66	0.13
Complex Individual	30	Pretest	0.52	0.06
		Posttest	0.62	0.07
		Delayed Posttest	0.62	0.10
Simple Collaborative	30	Pretest	0.50	0.08
		Posttest	0.81	0.08

Group	n	Test	M	SD
		Delayed Posttest	0.78	0.13
Complex Collaborative	30	Pretest	0.51	0.09
		Posttest	0.76	0.10
		Delayed Posttest	0.73	0.17
Control	30	Pretest	0.51	0.09
		Posttest	0.58	0.08
		Delayed Posttest	0.56	0.16

Note. M = Mean; SD = Standard Deviation.

Discussion of Results

The results demonstrate that collaborative task conditions (both simple and complex) had the most substantial positive impact on the writing accuracy of Pakistani ESL learners. The Simple Collaborative group showed the highest gains from pretest (M = 0.50) to posttest (M = 0.81), maintaining a strong performance in the delayed posttest (M = 0.78). Similarly, the Complex Collaborative group also performed well, improving from pretest (M = 0.51) to posttest (M = 0.76) and slightly declining in the delayed posttest (M = 0.73).

These findings suggest that collaborative learning creates opportunities for peer interaction, negotiation of meaning, and shared focus on language forms, which enhance accuracy in writing. This aligns with Vygotsky's sociocultural theory, which emphasizes the role of social interaction in language development, and supports Swain's (1985) Output Hypothesis, which highlights how learners benefit from producing language in meaningful contexts.

The Simple Individual group also improved notably (Pretest M = 0.53; Posttest M = 0.69), though its gains were smaller compared to collaborative groups. This indicates that while individual tasks promote focus, they may lack the scaffolding and error correction opportunities present in collaborative settings.

In contrast, the Control group showed minimal improvement (Pretest M = 0.51; Posttest M = 0.58), suggesting that traditional instruction without focused feedback (WCF) is less effective in improving writing accuracy.

Overall, these results indicate that task complexity and WCF are important, but collaborative task conditions amplify their effectiveness, making them particularly valuable in the Pakistani ESL undergraduate context where students often lack opportunities for interactive, feedback-rich writing activities.

The Effect of Task Variables on Writing Complexity

To address the second research question, descriptive statistics (mean and standard deviation) were calculated for syntactic complexity scores in the pretest, posttest, and delayed posttest. Table 2 presents these results, showing the performance trends of all groups across the three testing phases.

Table 2
Descriptive Statistics for Syntactic Complexity Scores in Pretest, Posttest, and Delayed Posttest

Group	n	Test	M	SD
Simple Individual	30	Pretest	1.27	0.14
		Posttest	1.25	0.16

Group	n	Test	M	SD
		Delayed Posttest	1.25	0.17
Complex Individual	30	Pretest	1.29	0.15
		Posttest	1.29	0.13
		Delayed Posttest	1.27	0.16
Simple Collaborative	30	Pretest	1.25	0.10
		Posttest	1.26	0.10
		Delayed Posttest	1.28	0.13
Complex Collaborative	30	Pretest	1.32	0.12
		Posttest	1.35	0.11
		Delayed Posttest	1.39	0.10
Control	30	Pretest	1.25	0.14
		Posttest	1.20	0.09
		Delayed Posttest	1.22	0.12

Note. M = Mean; SD = Standard Deviation.

Discussion of Syntactic Complexity Results

The results in Table 3 show that Complex Collaborative tasks had the most notable impact on learners' syntactic complexity. This group improved from a pretest mean of 1.32 to 1.35 in the posttest and further to 1.39 in the delayed posttest. This upward trend suggests that **collaborative writing combined with cognitively demanding tasks helps learners use more structurally complex sentences over time**, possibly due to the opportunities for peer scaffolding and negotiation of meaning.

In contrast, the **Simple Collaborative group** showed only a slight improvement (from 1.25 to 1.28 by the delayed posttest), indicating that while collaboration supports syntactic development, **task complexity plays a crucial role in challenging learners to use advanced structures**.

The **Individual task groups (Simple and Complex)** showed little to no change in syntactic complexity over time, with the Simple Individual group slightly declining (1.27 to 1.25) and the Complex Individual group maintaining their initial level (1.29 pretest and posttest, 1.27 delayed). This suggests that **individual writing tasks, even with feedback, may not be sufficient for pushing learners to expand their syntactic repertoire**.

The **Control group** showed a slight decrease in syntactic complexity (1.25 to 1.20 in posttest) and a minor recovery in the delayed posttest (1.22). This reinforces the finding that **traditional instruction without targeted feedback or interactive tasks is less effective in developing syntactic complexity**.

These findings align with **Robinson's Cognition Hypothesis**, which argues that increasing task complexity directs learners' attention to linguistic forms, especially in collaborative contexts where peer support allows them to attempt more complex sentence structures. They also support Vygotsky's **sociocultural theory**, highlighting how social interaction contributes to cognitive and linguistic growth in ESL writing.

Discussion

The findings of this study provide insightful evidence on the combined effects of task complexity, task condition, and written corrective feedback (WCF) on Pakistani undergraduate ESL learners' writing performance in terms of accuracy and syntactic complexity.

In terms of accuracy, learners in the Simple Collaborative and Complex Collaborative groups showed the highest posttest and delayed posttest gains, with means improving substantially compared to the pretest. This supports the idea that collaboration during writing tasks enables learners to negotiate meaning and co-construct knowledge, leading to fewer grammatical errors. These results align with Storch's (2016) argument that collaborative writing facilitates noticing of linguistic forms and provides scaffolding for error correction. Similarly, Bueno-Alastuey et al. (2022) reported that collaborative writing tasks coupled with feedback significantly enhanced learners' grammatical accuracy.

Contrastingly, the Individual task groups showed moderate gains, and the Control group demonstrated minimal improvement, suggesting that while WCF is valuable, interaction in collaborative settings plays a more decisive role in developing accuracy. This resonates with the findings of Ong and Zhang (2010), who noted that planning and peer interaction foster better attention to form in writing.

For syntactic complexity, only the Complex Collaborative group showed marked improvement from pretest to delayed posttest, indicating that cognitively demanding tasks in collaborative contexts pushed learners to employ more varied and sophisticated sentence structures. This result supports Robinson's (2001) Cognition Hypothesis, which posits that increasing task complexity directs attention to structural and lexical development. It also mirrors the findings of Revesz et al. (2017), who observed that complex tasks improved learners' lexical and syntactic sophistication. In contrast, Skehan's (1998) Tradeoff Hypothesis predicts that under cognitive load, learners prioritize meaning over form, possibly explaining why the Complex Individual group did not show significant syntactic gains.

Interestingly, the Simple Collaborative group exhibited only minor gains in syntactic complexity, highlighting that task complexity is essential for pushing learners beyond their comfort zones in terms of linguistic production. This aligns with Kormos (2011), who emphasized that simple tasks may not provide sufficient challenge to encourage syntactic innovation.

Overall, these findings underscore the synergistic effects of task complexity, collaboration, and WCF in enhancing both accuracy and syntactic complexity in ESL writing. They also extend previous research by focusing on Pakistani undergraduate learners, a population that has received limited attention in TBLT studies.

Conclusion

This study investigated the combined effects of task complexity, task condition, and written corrective feedback (WCF) on the writing accuracy and syntactic complexity of Pakistani undergraduate ESL learners. The findings revealed that collaborative writing tasks, especially those involving higher cognitive complexity, significantly enhanced learners' grammatical accuracy and syntactic sophistication. In contrast, individual tasks showed moderate improvement, and the control group exhibited minimal gains.

These results underscore the importance of integrating cognitively demanding, meaning-focused tasks and collaboration into ESL writing instruction. The study provides empirical support for Robinson's Cognition Hypothesis by demonstrating that task complexity can push learners toward producing more complex linguistic structures, particularly when combined with peer interaction and feedback. Additionally, it highlights the role of collaborative scaffolding, as suggested by Vygotsky's sociocultural theory, in improving learners' written performance.

Overall, these findings have important implications for ESL practitioners and curriculum developers in Pakistan. Incorporating task-based language teaching (TBLT) with collaborative elements and systematic feedback can lead to more effective

development of learners' writing proficiency. Future research should explore these variables across different proficiency levels and educational contexts in Pakistan to further validate and extend these findings.

Recommendations for Future Researchers

Future studies should replicate this research in different educational settings across Pakistan, such as public universities, colleges, and rural areas, to examine whether the effects of task complexity, task conditions, and WCF are consistent across varying proficiency levels and institutional contexts.

A longer timeframe could be adopted to investigate the sustained impact of collaborative writing tasks and WCF on learners' writing development, especially for tracking improvements in fluency alongside accuracy and complexity.

Researchers may extend the focus beyond writing and explore how task complexity and collaboration influence listening, speaking, and reading skills in ESL classrooms.

Future research can examine how digital tools (e.g., Google Docs, collaborative writing platforms, AI-based feedback systems) impact the efficacy of collaborative writing and WCF in TBLT frameworks.

It is recommended to consider learners' individual differences (e.g., motivation, anxiety, learning styles) to understand how these factors mediate the relationship between task design features and language performance.

Exploring teachers' perceptions of implementing complex, collaborative tasks and providing WCF can provide valuable insights for designing teacher training programs in the Pakistani ESL context.

References

Abdi Tabari, M., Lu, X., & Wang, Y. (2023). The effects of task complexity on lexical complexity in L2 writing: An exploratory study. System, 114, 103021. https://doi.org/10.1016/j.system.2023.103021

Baralt, M. (2013). The impact of cognitive complexity on feedback efficacy during online versus face-to-face interactive tasks. Studies in Second Language Acquisition, 35(4), 689–725. https://doi.org/10.1017/S0272263113000429

Baralt, M., Gilabert, R., & Robinson, P. (2014). An introduction to theory and research in task sequencing and instructed second language learning. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), Task sequencing and instructed second language learning (pp. 1–34). Bloomsbury. https://doi.org/10.5040/9781472593665.ch-001

Bueno-Alastuey, M. C., Vasseur, R., & Elola, I. (2022). Effects of collaborative writing and peer feedback on Spanish as a foreign language writing performance. Foreign Language Annals, 55(2), 517–539. https://doi.org/10.1111/flan.12611

Byrnes, H., & Manchon, R. M. (2014). Task-based language learning: Insights from and for L2 writing: An introduction. In H. Byrnes & R. M. Manchon (Eds.), Task-based language learning: Insights from and for L2 writing (pp. 1–23). John Benjamins. https://doi.org/10.1075/tblt.7

Candlin, C. N. (1987). Towards task-based learning. In C. Chistopher & M. Dermot (Eds.), Language learning tasks. Lancaster practical papers in English language education (pp. 5–22). Prentice Hall.

Carless, D. (2012). TBLT in ESL settings: Looking back and moving forward. In A. Shehadeh & C. A. Coombe (Eds.), Task-based language teaching in foreign language contexts (pp. 345–358). John Benjamins. https://doi.org/10.1075/tblt.4

Carr, N., & Weinmann, M. (2018). Written corrective feedback: The need for collaboration and multidirectional interaction. TESOL in Context, 27(1), 1–22. https://doi.org/10.21153/tesol2018vol27no1art770770

Carson, J. (2001). Second language writing and second language acquisition. In T. Silva & P. Matsuda (Eds.), On second language writing (pp. 191–200). Lawrence Erlbaum Associates. https://doi.org/10.4324/9781410600899

Cohen, J. W. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Cook, V. (2009). Developing links between second language acquisition research and language teaching. In K. Knapp & B. Seidlhofer (Eds.), The handbook of foreign language communication and learning (pp. 139–161). de Gruyter Mouton. https://doi.org/10.1515/9783110214246

Cumming, A. (2001). Learning to write in a second language: Two decades of research. International Journal of English Studies, 1(2), 1–23. https://revistas.um.es/ijes/article/view/48331

DiCamilla, F., & Anton, M. (1997). Repetition in the collaborative discourse of L2 learners: A Vygotskian perspective. The Canadian Modern Language Review, 53(4), 609–633. https://doi.org/10.3138/cmlr.53.4.609

Donato, R. (1994). Collective scaffolding in second language learning. In J. Lantolf & G. Appel (Eds.), Vygotskian approaches to second language research (pp. 33–56). Ablex.

Ede, L., & Lunsford, A. (1990). Singular texts/plural authors. Southern Illinois University Press.

Ellis, R. (2003). Task-based language learning and teaching. Oxford University Press.

Ellis, R., & Yuan, F. (2004). The effects of planning on fluency, complexity, and accuracy in second language narrative writing. Studies in Second Language Acquisition, 26(1), 59–84. https://doi.org/10.1017/S0272263104026130

Flower, L. S., & Hayes, J. R. (1980). The dynamic of composing: Making plans and juggling constraints. In L. W. Gregg & E. R. Steinberg (Eds.), Cognitive processes in writing (pp. 31–50). Lawrence Erlbaum Associates. https://doi.org/10.4324/9781315630274

Frear, M. W., & Bitchener, J. (2015). The effects of cognitive task complexity on writing complexity. Journal of Second Language Writing, 30, 45–57. https://doi.org/10.1016/j.jslw.2015.08.009

García Mayo, M. P. (Ed.). (2007). Investigating tasks in formal language learning. Multilingual Matters.

Gilabert, R. (2007). Effects of manipulating task complexity on self-repairs during L2 oral production. IRAL-International Review of Applied Linguistics in Language Teaching, 45(3), 215–240. https://doi.org/10.1515/iral.2007.010

Golparvar, S. E., & Rashidi, F. (2021). The effect of task complexity on integrated writing performance: The case of multiple-text source-based writing. System, 99, 102524. https://doi.org/10.1016/j.system.2021.102524

Granena, G., & Yilmaz, Y. (2021). Corrective feedback and grammatical complexity: A research synthesis. In H. Nassaji & E. Kartchava (Eds.), The Cambridge handbook of corrective feedback in second language learning and teaching (pp. 754–776). Cambridge University Press. https://doi.org/10.1017/9781108589789

Halford, G. S., Cowan, N., & Andrews, G. (2007). Separating cognitive capacity from knowledge: A new hypothesis. Trends in Cognitive Sciences, 11(6), 236–242. https://doi.org/10.1016/j.tics.2007.04.001

Hyland, K., & Hyland, F. (Eds.). (2006). Feedback in second language writing: Contexts and issues. Cambridge University Press. https://doi.org/10.1017/CBO9781139524742