

DOI: 10.5281/zenodo.12426801

AN EXPERIMENTAL STUDY OF THE EFFECT OF THE SIOP MODEL ON IRAQI EFL LEARNERS' WRITING SKILLS

Duaa Hassan Mahdi Alhaidary^{1*}, Asst. Prof. Mais Flaieh Al Jabbawi (PhD)²

¹University of Babylon/College of Basic Education/Department of English.
Email: bas843.duaa.hasan@student.uobabylon.edu.iq

²University of Babylon/College of Basic Education/Department of English.
Email: mais.aljabbawi@uobabylon.edu.iq ORCID iD: <https://orcid.org/0009-0002-8863-7040>

Received: 09/11/2025
Accepted: 23/04/2026

Corresponding Author: Duaa Hassan Mahdi Alhaidary
(bas843.duaa.hasan@student.uobabylon.edu.iq)

ABSTRACT

This study investigates the effect of the Sheltered Instruction Observation Protocol (SIOP) Model on enhancing the writing performance among Iraqi EFL 5th Primary School Learners. The study aims to investigate the effectiveness of SIOP-based instruction in improving learners' writing skills. The study adopted an experimental research method, with 69 learners randomly assigned to an experimental group (n = 34) and a control group (n = 35). The experimental group (EG) was taught through the SIOP model, and the control group (CG) was taught by the conventional methods. In order to achieve the aim of the study, a writing performance test was conducted at three stages: pre-test, post-test, and follow-up. The study's outcomes demonstrated a statistically significant advantage for the EG, thereby suggesting that SIOP-based instruction positively influenced the writing performance of the learners. These results indicate that the integration of the SIOP model within EFL primary classrooms can improve learners' writing performance. Consequently, this research advocates for the implementation of SIOP-based instructional strategies in the teaching of writing skills at the primary level and encourages additional investigation into its efficacy across various language skills and educational phases.

KEYWORDS: SIOP Model, Writing Performance, EFL Learners, Primary Education, An Experimental Study.

1. INTRODUCTION

Writing in a second language is one of the most difficult language skills since it requires several linguistic and cognitive processes (Hyland, 2003). Learners' small range of grammatical forms reflects their poor grammatical ability (Peterson, 2003). Despite writing's importance in school, many learners struggle to become proficient enough to satisfy the expectations of schoolwork (Graham & Perin, 2007). Among the many linguistic and organizational obstacles that Iraqi EFL learners have while composing written work are limitations in vocabulary, grammar, and the correct use of tenses, articles, and prepositions (Mohammed, 2024).

Thus, effective instructional models such as the SIOP framework are needed to improve EFL learners' writing. The SIOP Model presents a potential methodology for assisting English language learners in acquiring the academic literacy abilities essential for success in educational settings, particularly in academic writing (Short et al., 2011). To help English language learners with their academic knowledge, the SIOP Model incorporates both language and subject goals into organized instructional components (Echevarría et al., 2017). The only empirically verified framework for sheltered education, according to Echevarría et al. (2018), is the SIOP model, even though many other instructional methodologies have been developed for English language learners.

Prior studies have shown that the SIOP model improves a variety of EFL abilities, but its effectiveness in developing writing skills among primary school learners remains underexplored. To the best of the researcher's knowledge, limited empirical attention has been given to examining the impact of SIOP-based instruction on writing performance among Iraqi primary EFL learners. Therefore, the present study aims to experimentally investigate the effect of the SIOP model on learners' writing skills.

1.1 The Problem and Its Significance

The ability to effectively communicate and succeed academically in the twenty-first century, especially in text- and data-driven learning settings, depends on strong writing skills, which are generally acknowledged as fundamental (Hyland, 2003). Therefore, there is a strong motivation for research that aims to improve learners' writing performance, given the relevance of writing competence. For learners to be considered competent writers, they must be able to express themselves clearly and concisely in written form while making good use of

grammar, punctuation, and a wide range of vocabulary words (Nasser, 2019).

The capacity to build coherent and meaningful texts through the application of vocabulary, grammar, and discourse organization is reflected in learners' written production; hence, it is essential to strengthen linguistic knowledge in order to improve L2 writing performance, according to research in second language writing (Brisk, 2011). The current study fills the gap by experimentally examining the effect of SIOP-based instruction on the writing abilities of Iraqi fifth-grade EFL learners, a topic that has received limited empirical attention, especially within the Iraqi EFL context.

1.2 Aims of the Study

This study is an attempt to test the effectiveness of SIOP model in improving the writing skills of Iraqi fifth-grade EFL learners. In addition, it also seeks to evaluate the sustainability of the SIOP model's effect on learners' writing performance, as assessed through a follow-up test.

1.3 Hypotheses of the Study

Based on the aforementioned aims, this study hypothesizes the following:

Hypothesis 1 posits that learners receiving instruction through the SIOP model are expected to demonstrate a significant enhancement in writing quality in the post-test as compared to their counterparts receiving traditional instruction.

Hypothesis 2 it is expected that there will be no statistically significant difference between the post-test and follow post-test in the mean score of the EG, signifying the enduring impact of SIOP-based teaching on writing performance.

2. THEORETICAL BACKGROUND

2.1 Writing as a Complex Skill in EFL Contexts

According to Mohamadbahauldin (2023), writing is usually taught at later stages of language skill development since it is seen as a productive talent that grows after learners acquire enough information from hearing and reading. To keep young learners interested and help them build their ideas in real-world situations, primary EFL classes often include genuine tasks and resources such as oral exercises, portfolios, games, and writing projects. Activities like this encourage learners to work together and communicate with one another, which is crucial for their writing growth (Aprilianti, 2024).

Inadequate command of writing mechanics, vague evaluation criteria, restricted idea production, and problems associated with

grammatical complexity are prominent causes of writing difficulties among Iraqi EFL school learners (Al-Salamee & Kaddam, 2025). According to Stephen Krashen (1982), it is possible to consciously acquire certain parts of the language, such as grammatical morphology and written discourse standards (such as punctuation and textual organization). It is his firm belief that learners cannot succeed in academic settings without a solid foundation in language skills.

2.2 The SIOP Model as an Instructional Framework

Echevarría et al. (2017) established the SIOP Model framework for ESL learners by bringing together language and content objectives in a form of instructional support. The notion stems from the necessity for educating to be systematic and well-organized to work for both the linguistic and academic ends at the same time (Echevarría et al., 2017). The SIOP Model is an integrated instructional model that includes eight components: Lesson Preparation, Background Building, Comprehensible Input, Strategies, Interaction, Practice and Application, Delivery of Lesson, Review and Assessment. Echevarría et al. (2010) states that each element is further defined by 30 distinct instructional features that demonstrate how the principle can be enacted in the teaching and learning setting. The SIOP model eight components are not inflexible sequential procedures but are fluid guiding principles which can be implemented in a wide variety of classrooms (Denchai, 2016).

2.3 Theoretical Foundations of the SIOP Model

The SIOP Model aligns with Vygotsky's sociocultural theory as it facilitates learning through scaffolding in the zone of proximal development (ZPD) (Maiboroda, 2024) and because it highlights scaffolding, mediated interaction, and meeting learners' cultural and cognitive necessities. The SIOP model and the Cognitive Academic Language Learning Approach (CALLA) both aim to support learners in developing their English language skills by incorporating academic vocabulary, language functions, and discipline-specific discourse within meaningful tasks (Chamot & O'Malley, 1986). Consistent with the SIOP model, from the constructivist perspective learners are expected to be actively engaged in the construction of meaning based on their prior knowledge, language proficiency, and culturally relevant experiences (Do et al., 2023).

2.4 Relevance of the SIOP Model to Writing Development

The evaluation of writing performance is usually based on five fundamental components: content, organization, vocabulary, grammar, and mechanics, which collectively provide a thorough framework for evaluating learners' written output (Heaton, 1988; Khaeri, 2017). The combination of content instruction and language development in the SIOP model offers a variety of opportunities for meaningful use of English in the four language skills with an emphasis on writing. Learners develop academic language and topic knowledge through guided practice, interaction, and the distribution of instruction as they utilize new acquired knowledge in writing tasks (Al-Fadda, 2020). Writing is not viewed as an isolated skill in this perspective but rather an important means of demonstrating comprehension (Short & Echevarría, 1999).

3. METHODOLOGY

3.1 Research Design

The present study was an experimental research design which investigated the impact of SIOP model on writing skill of fifth grade EFL learners in Iraq. The design featured a pre- and post-test for both the experimental group (EG) and the control group (CG). In addition, a follow-up test was conducted to determine whether the effect of learning was lasting.

3.2 Participants

From a public primary school in Iraq, 69 fifth-grade EFL learners were selected to take part in the study. This study involved intact classes as participants, simulating a real classroom environment, and the learners were assigned into two groups: experimental ($n = 34$) and control ($n = 35$). All of the participants in the study came from the same school, and all were required to take English classes regularly.

3.3 Instructional Treatment

The EG was taught through the SIOP model, which integrated language and content objectives in a systematic way of lesson planning, interaction, and guided practice. Instruction in writing aimed at enhancing learners' vocabulary, sentence structure, and structured writing exercises, enabling them to utilize their language proficiency in significant contexts. Collaborative work and constant feedback on ideas formulation, organization, and the accuracy of their written products were emphasized. The intervention was embedded within the regular

English curriculum over a period of approximately seven weeks from 13th November to 5th January. In contrast, the CG received the conventional EFL teaching, with minimal emphasis on guided writing activities or structured language support.

3.4 Instruments

The writing achievement test served as the main means of data gathering. L2 learners' writing was scored by an analytic rubric including five dimensions: content, organization, vocabulary, grammar and mechanics. To gauge the degree to which writers improved and to determine whether such gains could be sustained over time, The test was also administered as a post-test and a follow-up test. The content validity of the test and scoring rubric was confirmed by a panel of EFL experts. The scoring was subjected to statistical analysis to prove its reliability.

3.5 Validity and Reliability

The writing achievement test and the analytic scoring rubric were reviewed by a group of EFL specialists in order to validate their content. Consistency of scoring was also examined and

appropriate statistical procedures were conducted on the pilot data to confirm reliability and to ensure that the measurement instruments were stable and consistent..

3.6 Data Analysis

The collected data were analyzed using appropriate inferential statistical techniques to compare the performance of the EG and CG across the testing phases. Statistical significance was determined at the 0.05 level.

4. RESULTS

4.1 Results related to group equivalence (pre-test)

The results of the study revealed that there was no statistically significant difference between the experimental group ($M = 5.15$, $SD = 3.78$) and the control group ($M = 3.57$, $SD = 3.19$) on the pre-test, as confirmed by an independent-samples t-test ($t(67) = 1.87$, $p = .065$), indicating that the two groups were comparable before the instructional intervention, as presented in Table 1.

Table 1: Independent Sample's T-test.

Group Statistics						
Groups	No. of learners	Mean	SD.	T-Value	DF	Level of Significance
EG.	34	5.15	3.775	1.874	67	.065
CG.	35	3.57	3.193			

4.2 Results related to the first aim and Hypothesis 1 (post-test)

Regarding the first aim of the study and Hypothesis 1, the post-intervention results demonstrated a statistically significant difference in writing achievement between the EG and the CG in

favor of the EG. Analysis of gain scores showed that learners exposed to the SIOP-based instruction achieved significantly higher gains ($M = 9.56$, $SD = 3.12$) than those receiving traditional instruction ($M = 7.69$, $SD = 4.14$), $t(67) = 2.12$, $p = .038$, with a moderate effect size (Cohen's $d = 0.51$) as shown in the following table.

Table 2: Comparison of Gain Scores between the EG and CG in Writing Skills.

Group Statistics						
Groups	No. of learners	Mean	SD.	T-Value	DF	Level of Significance
EG.	34	9.56	3.116	2.118	67	.038
CG.	35	7.69	4.143			

4.3 Results related to the second aim and Hypothesis 2 (Follow-up)

Concerning the second aim of the study and Hypothesis 2, a paired-samples t-test comparing the experimental group's post-test ($M = 14.71$, $SD = 4.35$)

and follow-up test scores ($M = 14.38$, $SD = 4.51$) indicated no statistically significant difference between the two measurements, $t(33) = 0.76$, $p = .451$, suggesting that the improvement in learners' writing performance was maintained over time as shown in the following table.

Table 3: Paired Samples t-test Results of the EG in the Post-test and Follow-up Test.

Group Statistics						
EG		Mean	SD.	T-Value	DF	Level of Significance
Post Test		14.7059	4.34518	.764	33	.451
Follow-up Test		14.3824	4.51271			

5. DISCUSSION OF RESULTS

The results of this study demonstrated that there was a positive statistically significant impact of using the SIOP Model in developing writing skills of Iraqi EFL fifth-grade learners. Learners in the EG outperformed those in the CG on the post-test, indicating that structured, comprehensible, and interactive instruction contributes effectively to improving young learners' written performance. This result supports the first hypothesis and indicates that the combination of clear language goals, scaffolding, meaningful practice, and sustained interaction promotes writing development.

The EG's superiority can be explained by a number of the distinctive elements of the SIOP Model such as well-organized lesson planning, guided practice, immediate feedback, and meaningful written output practice. These teaching strategies allowed the learners to practice sentence construction, vocabulary use, and writing with guidance on several occasions. In the Iraqi context where learners have limited chances to engage in guided writing practice in primary EFL classrooms, the SIOP Model's structure seems to be significantly promising. By contrast, the traditional instruction group had relatively less opportunities for planned interaction and guided writing practice, which may contribute to their comparatively poorer performance. This finding is in line with previous research that indicated substantial enhancement in EFL learners' writing abilities after sheltered and structured instruction such as improvement in vocabulary usage, content organization, grammatical accuracy and writing mechanics (Abdel-Gawad, 2024; Abdel-Latif, 2024).

As to the second hypothesis, the EG did not differ significantly in their post-test and follow-up test results, which means that gains were maintained. This indicates that the effects of the SIOP Model are not limited to immediate gains but are associated with longer-term outcomes of learning. In terms of theory, such continued gains are consistent with sociocultural learning theory, which posits that scaffolding, guided interaction with peers and the gradual release of responsibility model contribute to lasting internalization of behaviors in one's Zone of Proximal Development. The SIOP Model makes these theoretical tenets practical through a predictable pattern of scaffolding and meaningful interaction that allows learners to increasingly

practice writing skills on their own.

In addition, the results be explained in view of cognitive learning theory, which stress that meaningful practice, rehearsal, and processing of input are necessary to foster retention. The reinforcement of durable learning is also supported by the SIOP Model's focus on clearly defined language objectives, guided practice, and repeated review and evaluation to support learners as they are acquiring linguistic knowledge over time. The findings corroborate earlier studies reporting that continuous and properly delivered SIOP based instructional modules result in long-term academic enhancement for EFL learners (Bates, 2024; Ali et al., 2021). In sum, the findings contribute to fill the gap between theory and practice and demonstrate that SIOP Model is an effective instructional approach to support the development of, and to maintain, writing skills for at-risk EFL learners in primary education in the context of Iraq.

6. CONCLUSION

The current study research aimed at examining the effectiveness of the Sheltered Instruction Observation Protocol Model (SIOP) in developing the writing of Iraqi fifth grade/EFL learners. The results indicated that SIOP instruction positively affects students' writing performance over traditional instruction and that the improvement remained for some time as the follow up test revealed. The findings highlight the teaching significance of explicit language objectives, well-organized scaffolding and real writing tasks in the EFL primary classrooms. By utilizing a unique integration of language and content curricula, the SIOP Model promotes a learning atmosphere that supports both short-term and long-term writing development.

This study adds to the existing literature by providing further evidence on the extent to which the SIOP Model can be adapted for use in the primary education setting in Iraq, a context which has been under-researched. The results suggest SIOP-facilitated instruction can serve as a promising pedagogical framework to guide struggling young EFL writers. Further studies could investigate the effects of SIOP Model on other language skills, its application in different educational levels, or in other EFL environments to confirm and, in a sense, to further develop its potential as an instructional approach.

REFERENCES

- Abdel-Gawad, R. A. B. (2024). The effectiveness of using sheltered instruction for developing EFL writing skills among preparatory official language school pupils. *Journal of the Faculty of Education*, 139(2), 49-78.

- Abdel-Latif, O. L. I. (2024). Using content-based sheltered instruction observation protocol (SIOP) for developing Faculty of Education second-year English majors' language proficiency. *Journal of Research in Education and Psychology*, 39(2), 265-319.
- Ali, H., Afzal, H., & Basri, R. (2021). Effect of sheltered instruction observation protocol (SIOP) model on eighth-grade students' academic achievement in English. *Review of Applied Management and Social Sciences*, 4(4), 909-919.
- Al-Salamee, A. A. A., & Kaddam, M. K. (2025). A systematic review of articles on Iraqi EFL students' writing difficulties. *Journal of Sustainable Studies*, 7(3), 1065-1082.
- Aprilianti, B. D. A. (2024). Teaching English writing for primary students: Constructivism views. *Journal of English Teaching*, 10(3), 255-265. <https://doi.org/10.33541/jet.v10i3.6067>
- Bates, M. (2024). *SIOP implementation across the curriculum: A systematic review* (Master's thesis). The Ohio State University.
- Brisk, M. E. (2011). Learning to write in the second language: K-5. In E. Hinkel (Ed.), *Handbook of Research in Second Language Teaching and Learning* (Vol. 2). Routledge
- Chamot, A. U., & O'Malley, J. M. (1986). *A cognitive academic language learning approach: An ESL content-based curriculum*. National Clearinghouse for Bilingual Education.
- Denchai, P. (2016). Sheltered instruction observation protocol (SIOP): Overview, misconceptions, and considerations for implementation. *Journal of Education*, 27(3), 1-17.
- Do, H., Do, B. N., & Nguyen, M. H. (2023). How do constructivism learning environments generate better motivation and learning strategies? The design science approach. *Heliyon*, 9, e22862.
- Echevarria, J., Vogt, M. E., & Short, D. J. (2010). *Making content comprehensible for secondary English learners: The SIOP model*. Allyn & Bacon.
- Echevarria, J., Vogt, M. E., & Short, D. J. (2017). *Making content comprehensible for English learners: The SIOP model* (5th ed.). Pearson.
- Echevarría, J., Vogt, M. E., & Short, D. J. (2018). *Making content comprehensible for secondary English learners: The SIOP® model* (3rd ed.). Pearson.
- Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Review of Educational Research*, 77(4), 445-475.
- Heaton, J. B. (1988). *Writing English language tests*. Longman.
- Hyland, K. (2003). *Second language writing*. Cambridge University Press.
- Khaeri, N. (2017). *Using sheltered instruction observation protocol (SIOP) model to improve the students' writing skill (A pre-experimental research at the eighth grade students of MTs Muhammadiyah Lempangan)* (Master's thesis). Muhammadiyah University of Makassar.
- Krashen, S. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- Maiboroda, R. (2024). The SIOP model context and its usage in the subject-specific English lessons. *International Multilingual Journal of Science and Technology*, 9(1), 6972-6975.
- Mohamadbauldin, U. Q. (2023). The bases of writing appropriate English curricula for Iraqi students in primary, middle, and secondary schools. *eJHAS*, 1, 90-108. <https://doi.org/10.33193/eJHAS.01.2023.273>
- Mohammed, A. (2024). Exploring the landscape of EFL writing research in Iraq: A comprehensive analysis of scope, limitations, and strengths. *Bulletin of Advanced English Studies*, 9(2), 56-70. <https://doi.org/10.31559/BAES2024.9.2.3>
- Nasser, S. M. (2019). Iraqi EFL students' difficulties in writing composition: An experimental study (University of Baghdad). *International Journal of English Linguistics*, 9(1), 178-184. <https://doi.org/10.5539/ijel.v9n1p178>
- Peterson, P. W. (2003). *Developing writing: Writing skills practice book for EFL*. United States Department of State, Office of English Language Programs.
- Short, D. J., & Echevarría, J. (1999). *The sheltered instruction observation protocol: A tool for teacher-researcher collaboration and professional development*. Center for Research on Education, Diversity & Excellence.
- Short, D., Echevarría, J., & Richards-Tutor, C. (2011). Research on academic literacy development in sheltered instruction classrooms. *Language Teaching Research*, 15(3), 363-380.