Implementation of the Sheltered Instructional Observation Protocol (SIOP) Model in the Saudi Classroom: EFL Teachers' Perspectives

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Abstract
This study evaluates the Sheltered Instruction Observation Protocol (SIOP) model and its application in the Saudi classroom from the English language teachers' perspective. The study used a descriptive study design, with a selected sample of 300 male and female English language teachers from elementary and middle schools. The research conducted a group-wide comparison using the Statistical Package for Social Sciences (SPSS). Findings illustrate that educational qualification, career status, job experience and training courses substantially affect application of the SIOP model in the classroom. Results also show that technical, financial capabilities and teachers' qualifications enable the SIOP implementation in the Saudi classroom. The study suggests the implementation of the SIOP model for the sake of transitioning from the traditional English language education system to more advanced methods concerned with the systematic evaluation of English language teachers and classroom environment standards. The recommendation includes training teachers on the SIOP model and emphasizes providing other countries with the guidelines related to SIOP implementation in the English classroom.

Keywords: classroom environment, EFL teachers, sheltered instruction observation protocol (siop), English language learning

Introduction:

Globally, the population of English language students is substantially expanding (Abdulmughni, 2019; Alrashidi & Phan, 2015; Daniel & Conlin, 2015). For instance, the current enrolment of language learners globally is about 1.5 billion (Beare, 2018). This vast number is particularly significant in Arab countries, where English is the sole foreign language used (Alrashidi & Phan, 2015). The use of foreign language is significantly increasing, where an increasing number of Saudi citizens aim to improve their English competence (Al-Seghayer, 2014). However, understanding and learning become substantially challenging as the language differs from that of their native language.

Most studies confirm that these language difficulties lead to substantial achievement differences among the students (Alrashidi & Phan 2015; Daniel & Conlin, 2015). This situation is prevalent internationally between students who are less proficient in the instructional language, especially for first- and second-generation immigrants (Abdulmughni, 2019; Daniel & Conlin, 2015; Schneeweis, 2011). Different models are used for mitigating the educational gap between the native and the language learners, developing their subject-related skills as well as improving their language simultaneously (Daniel & Conlin, 2015).

Various studies highlight the significant role of the teachers in the classroom, who devise the educational goals creating a favorable environment and teaching new and related tasks (Koc, 2016; Valle et al., 2013). Abdulmughni (2019) also emphasized the role of teachers in facilitating language learners. Koura & Zahran (2017) advocate that instructions should be clear and specific, focused on providing a safe classroom environment aimed at improving student performance. One such approach deployed is of the Sheltered Instruction Observation Protocol (SIOP) model, an observational research-based instrument to measure sheltered instruction. SIOP is a concept-based methodology in teacher training that evaluates the teacher's effectiveness in the classroom (Nitiprateep, 2015). SIOP uses several activities to help develop students' second/foreign language competence and proficiency (Macías et al., 2012).

Saudi student enrolment in English learning courses continues to increase in public schools. However, the overall academic performance of English Language Learners (ELLs) is considerably low. Empirical evidence suggests that the use of the SIOP model serves as a useful model for enhancing ELLs' academic performance (McIntyre et al., 2010). Appying it, teachers present curricular content concepts using tactics and methods that aid in improving content knowledge while simultaneously improving academic English skills. These strategies are employed by incorporating listening, writing, speaking, and reading skills into the curriculum. Its application is flexible as the teacher can adapt these strategies per the classroom configuration and students' needs. These features of the SIOP model help improve the English language learning capacity of the students (Short, 2000).

Given the significance of the SIOP model, this study strives to (1) highlight lack of comprehensive research concerning SIOP use for teaching English and (2) highlight use of SIOP to improve students' foreign-language acquisition. Currently, there are no research investigations into SIOP and its use for grammar learning, especially for improving listening skills and acquiring vocabulary knowledge. This is because the number of researchers who are studying student

achievement of English language acquisition is notably low (Ebtesam, 2017; Faraj, 2017; Gamlo & English Institute, 2019).

An improved classroom environment not only helps make school environments conducive to learning but also helps students engage in communication other than that in a classroom, i.e., in a natural setting. However, the SIOP model implementation in Saudi Arabia, related to language learning, has remained limited; primarily with regard to information concerning the perception of teachers related to SIOP. To bridge this gap, this study intends to identify the availability of the appropriate environment for SIOP application in the Saudi classroom, which is significant given the importance of the English language in daily life.

At present, proficiency in English is no longer a mere luxury or a status symbol but rather a necessity in all walks of life. SIOP application contributes by providing a solution to English language learning difficulties for middle school students. It also helps the ELLs, who are entering Saudi schools with low English proficiency as well as with educational background gaps. Most Saudi curricula, as well as instruction, are formed on the common misconception that students are already competent in speaking English upon starting school. Therefore, use of SIOP is an recommended approach for sheltered instruction, which is likely to assist English language learners in improving their overall language competence.

SIOP Model Overview

The eight components of the SIOP model include (1) lesson preparation, (2) building background, (3) comprehensive input, (4) strategies, (5) interaction, (6) practice or application, (7) lesson delivery and (8) review and assessment (Murillo & Alejandro, 2013). In lesson preparation, the teacher examines the planning process of the lesson, taking into consideration the content objectives and language, supplementary use of materials and activities' meaningfulness. By building a background component, the teacher intends to focus on connecting the student's background experience and prior learning as well as focusing on the development of students' academic vocabulary. Comprehensive input includes the teacher's consideration towards his/her speech, modeling of academic tasks, and the use of multimodal strategies for enhancing comprehension. In the strategy component, the teacher highlights the significance of the learning strategies, scaffolding instructions and higher-order thinking skills. The interaction component focuses on the encouragement the teacher supplies to the individual student for their use of oral language as well as promoting group interaction using appropriate language and content development (Murillo & Alejandro, 2013). Concerning the practice/application component, the students engage in teacher-instructed activities encouraging them to communicate with each other. Lesson delivery refers to the teacher's presentation of the planned lesson objectives, which enables the students to engage in it as well as pace the learning. The last component of review and assessment is the stage at which a report is prepared based on the teacher's progress with regard to the content concepts, students' learning and students' feedback.
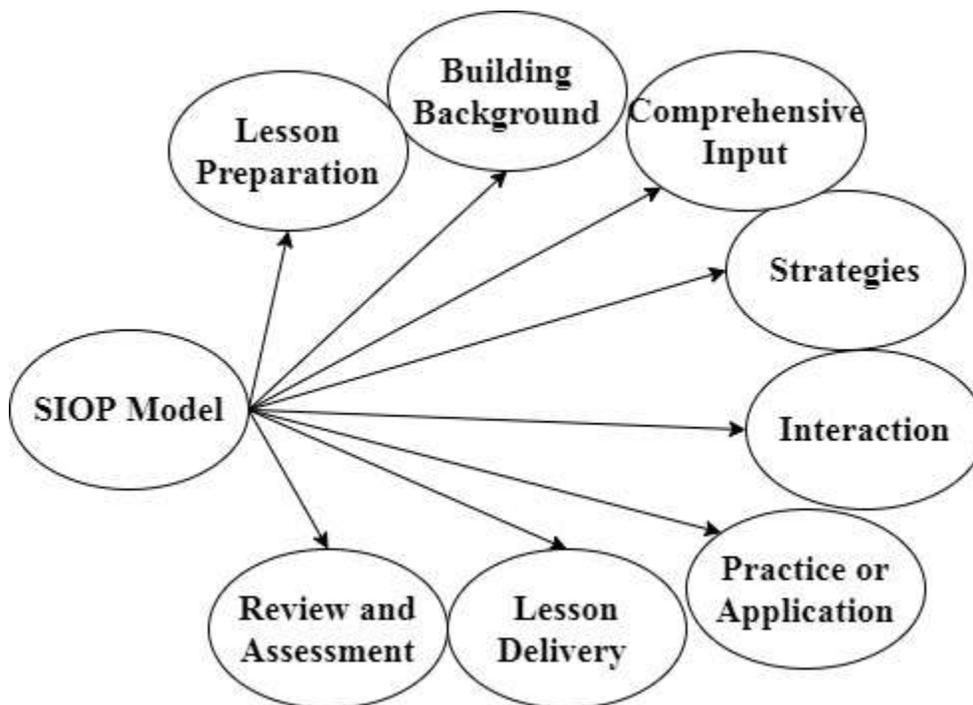
Figure 1 SIOP Model

Research Questions

This research concentrates on the following questions:
1. Are there statistically significant differences at the level 0.05 among the views of EFL teachers on the application of the SIOP model attributed to the classroom environment?
2. Are there statistically significant differences at the level 0.05 among the views of EFL teachers on the application of the SIOP model in general?
3. Are there statistically significant differences at the level 0.05 among the views of EFL teachers on the application of the SIOP model attributed to teacher qualifications?

Research Hypotheses
- H1: There is a significant difference in the teachers' perceptions toward implementing the SIOP model with regard to the classroom environment.
- H2: There is a significant difference in the teachers' perceptions toward implementing the SIOP in general.
- H3: There is a significant difference in the teachers' perceptions toward implementing the SIOP model with regard to teachers' qualifications.

Literature Review

The SIOP model is considered to be a practical approach for improving the academic performance of ELLs. According to Echevarría & Vogt (2010), sheltered instruction is a teaching method used for strategically teaching content to ELLs, improving their understanding of subject matter concepts. Various studies have shown that teachers need to be adequately trained and

provided with a coherent method for delivering mainstream classroom ELS instruction (Fregeau & Leier, 2015; Song & Samimy, 2015). Echevarria & Short (2014) recognized SIOP to be more effective than a content-objective teaching strategy.

Valle, Waxman, Diaz, & Padro (2013) stated that mathematics lesson plans based on SIOP are useful for improving ELLs' performance. This provides students with a clear understanding of the directions, instant feedback, and better communication between peers and teachers. Phan's (2015) research using the inductive approach showed how teaching conditions at an institute impact EFL teaching. The SIOP model emphasizes the use of different interactive strategies for deriving effective results. In the same context, Alsalihi's (2020) research showed that use of visuals, such as posters, helped improve students' interaction as well as vocabulary learning results.

Lowenstein & Brill (2010) explain how the SIOP framework enables teachers to view various group configuration practices while carrying out critical reflection on their practices and identifying their assumptions, which appear to be more favorable to them when compared to the students' learning. Ross & Ziemke's (2016) study notes that many educators disregard the traditional English-language-development standard, preferring to use the instructional model of language teaching instead. This model encourages teachers to consider their accountability and revamp their strategies for improving their students' language development and literacy outcomes. Short (2013) argues that the use of coaching practices in the SIOP model implementation helps overcome difficulties related to its deployment.

The SIOP model systematically weaves content as well as language objectives into a grade-level curriculum, which is presented by English language teachers using modified instructions (Batt, 2010). Teachers consistently develop the academic language proficiency of the students in their lesson planning related to the developmental needs of ELLs. The model's eight components are critical for ensuring that content is comprehensible for limited English proficient (LEP) students.

Korrin (2011) notes that teachers can learn how to use the SIOP model in their lesson planning through training and mentoring. This also helps them learn about techniques that they can later use in their classrooms. The SIOP model enables the application of content and language knowledge to the students in the classroom by integrating different activities. It also helps these students practice using new content knowledge and activities that encompass all language skills (i.e., writing, reading, listening, speaking) (Hayden, 2019).

In his paper, *Sheltered Instruction Observation Protocol: Overview, Misconceptions, and Considerations for Implementation*, Prabjandee presents a historical overview of the SIOP model, discusses misconceptions and investigates the applicability of SIOP in the Thai context. The author argues the potential of the SIOP approach to develop language learning achievement and support English language learners in Thailand to become successful language learners (Prabjandee, 2016).

In his thesis, *Exploring the Teaching Sheltered Instruction Observation Protocol from Teacher Perspectives*, Pillay discusses the effectiveness of the SIOP model in the South African context. It used Stufflebeam's Context-based evaluation framework, Input, Process and Product (CIPP)

model. The findings showed that the CIPP model is based on four elements, C for Context, I for Input, P for Process, and P for Product; which is useful for evaluating the quality of education in schools (Pillay, 2011).

The Environment of a SIOP Classroom

The classroom environment refers to the learning environment that is created in the classroom. An effective classroom environment should maximize instructional time, support students, and motivate them to learn and succeed (Echevarría & Graves, 2007). Banks points to the formation of a positive learning environment using strategies that help manage classroom behavior of the students. These strategies are useful for reducing problematic behaviors that occur in the classroom (Banks, 2014). As Stewart explains in *Classroom Management in the Online Environment*, when appropriate preventive management strategies are applied, these strategies help to make the online learning environment as enriching and productive as that of the traditional classroom (Stewart, 2018).

Parsonson studied this point in *Evidence-based Classroom Behavior Management Strategies* (Parsonson, 2012). The techniques presented in the paper are consistent with those of the Saudi Ministry of Education's *Positive Behavior for Learning* (PB4L) initiatives. The classroom environment is a significant factor affecting the learning of the student (Shernoff, Ruzek, & Sinha, 2017). A positive classroom environment is one in which students feel a sense of affiliation, where they trust others, and where they feel supported when tackling challenges, taking risks, and asking questions.

Teacher Role in the Classroom Environment

Various types of research on the classroom environment focus on the behavior of the teachers, particularly on their professional development, as well as the school's cultural development, and its impact on the classroom environment (Hayden, 2019). Some researchers suggest that the complexity of a productive classroom environment exceeds the scope of a first-year teacher and advise that a new teacher's training must include intense monitoring and mentorships, which can decrease their level of isolation and encourage productive as well as meaningful relationships within the school community (Patrick et al., 2007).

Measuring the Classroom Environment

Classroom environment measurement is based on three essential dimensions:
- The Relationship Dimension: Interpersonal relationship development of the students and the teacher in a classroom.
- The Personal Development Dimension: Each member's personal characteristics.
- The System Maintenance and Change Dimension: Teacher attributes (i.e., control of classroom and order and change responsiveness).

These three dimensions and their various combinations are the focus of several types of research.

Teacher Professional Development (PD)

Teacher Professional Development (PD) is recognized as an instrumental tool that helps to enhance the quality of teaching and learning in Saudi schools. Traditionally, PD policy highlights

teaching from a deficit perspective, focusing on facets to be fixed. In PD, teachers work from a surplus of pre-existing knowledge, practices, skills, and teacher-related identities. The purpose of PD is to adopt novel methods for talking to, relating with, and acting towards students and other teachers (Battey & Franke, 2008). The SIOP model of teacher PD is designed to address the reality in the classroom that teachers confront when dealing with the need to provide both language instruction and content instruction simultaneously (Echevarría et al., 2011; Echevarría & Vogt, 2010).

Methodology
Study Design
This study followed the descriptive analytical approach to conduct an exploratory study on a proposal to establish a classroom environment in Saudi Arabia using the SIOP model. The descriptive approach was used to illustrate this feasibility, analyzing data collected from questionnaires that were designed to test the hypotheses of the study.

Study Population and Sample
The study sample consists of teachers who taught English Language courses in Saudi Arabia from 2018 to 2019. This sample was selected based on the set study objectives and their relevance for providing accurate findings. The inclusion criteria of the study required the respondents to be an English Language teacher in elementary and middle schools during the school year 2018/2019. A total of 73 middle schools and 55 elementary schools that follow multiple strategies and models in teaching English language were selected. The teachers from these schools were then grouped into two sub-groups, where the middle and elementary school teacher perceptions and differences concerning SIOP were explored.

Data Collection
A survey-based questionnaire gathered the data. This questionnaire was divided into four axes. Demographic characteristics were collected in the first axes. In contrast, the other axes dealt with the testing of the study hypotheses, where the questionnaire was presented for arbitration to a group of professors specialized in the field of study. The items of the questionnaire were based on a 5-point Likert scale. Table 1 shows the quantitative weights of the answers.

Table 1

Quantitative Weights of the Answers based on a 5-point Likert Scale

Opinion	Weight
Strongly Agree	4–5
Agree	3–3.99
Neutral or conservative	2–2.99
Opposed	1.0–1.99
Strongly Opposed	0.00–0.99

Note: The level of significance is High 3.67-5, Medium 2.34-3.66, and Weak 1-2.33.

The scale was calculated by using the equation (a), where the answer 1.333 was added to the final category.

$$\frac{Upper\ Limit\ of\ scale\ (5) - The\ minimum\ scale\ (1)}{Number\ of\ required\ categories\ (3)} \quad \text{(a)}$$

After modifying the questionnaire's clauses that evaluate its ability to test the hypotheses, it was distributed to the English language teachers, referred to as the intermediate stage. At the intermediate stage, three questionnaires were distributed. Of 350 forms distributed, 50 were considered invalid for analysis and were excluded. Thus, the net sample was comprised of 300 individuals, equivalent to 85.7% of the study population. This percentage is considered representative of the entire population, according to the scientific research standards.

To begin, a workshop was conducted where the teachers were introduced to the SIOP method, its uses and its effectiveness for improving language learning competence. After this workshop the questionnaire was provided to the teachers, which included questions related to the classroom environment axis. The researchers also asked questions related to the axis of using the SIOP model through the courses they received in the curricula and English-language teaching methods.

Instrument Validity and Precision

Questionnaire distribution among respondents with teaching experience tested its validity. The reliability of the questionnaire was confirmed using the Cronbach alpha, where the value of 0.958 was achieved. For all the queries, since they exceed the Cronbach's Alpha coefficient, the acceptable percentage is 0.70. This means that the results, the responses from the English language teachers, of the questionnaire indicate its reliability in achieving the study objectives as shown in Table 2.

Cronbach Alpha Factor

Variable	No. of items	Cronbach's Alpha Factor
Classroom environment	19	0.939
The extent of application of the SIOP model	15	0.722
The applicability of SIOP	17	0.933
Total	51	0.958

The questionnaire consisted of 51 statements to include all study variables. Statements 1-19 measured the classroom environment, statements 20-34 measured the SIOP model implementation, and statements 35-51 measured the SIOP applicability with regard to teacher qualifications.

Statistical Analysis

IBM software SPSS (Statistical Package for Social Sciences) version 23.0 was used for the analysis. Average and standard deviations for analyzing the answers of the sample members, along with the validity test, were performed. The groups were compared using a one-sample t-test, where the statistical significance was determined to be p-value <0.05. The Kolmogorov–Smirnov test was used to determine the extent to which the data followed a normal distribution.

Results and Discussion

Demographics of the respondents are presented in Table 3. With regard to the gender of the respondents, 55% were male and 45% were female. The majority of the respondents, 62.3%, hold Bachelor's degrees, while 34.7% hold Master's degrees. With regard to the teachers' career levels, 46.67% were experienced teachers, 28.89% were practicing teachers, 22.22% were advanced teachers and 2.22% were expert teachers. These career levels indicate the respondents' ability to understand the questionnaire's queries and the study subject.

The results showed that 35.56% of the respondents possessed six to ten years of teaching experience, the most significant percentage of the study sample. Respondents with 11-15 years of teaching experience were second, 31.85%. This indicates that the majority of the respondents' experience ranged from a moderate degree of experience to a relatively long period of teaching experience. This was followed by 21.48% with 5 years or less of teaching experience and 11.11% with sixteen years or more of experience.

Table 3
Respondent Characteristics

Variable	No. Respondents	Percentage
Gender		
Male	165	55%
Female	135	45%
Qualification		
Bachelor's degree	187	62.3%
Master's degree	113	37.4%
Total	300	100%
Career level		
Experienced Teacher	140	46.67%
Practicing teacher	87	28.89
Advanced teacher	67	22.22%
Expert teacher	6	2.22%
Total	300	100%
Job experience		
Five years and under	64	21.48%
From 6 to 10 years	107	35.56%
From 11 to 15 years	96	31.85%
16 years and over	33	11.11%
Total	300	100%

Variable	No. Respondents	Percentage
Training courses		
Education strategies	99	33.34%
Teaching methods	100	33.33%
Behavioral assessment	99	33.33%
Total	300	100%

First Hypothesis

Null hypothesis 1 was tested based on respondents' answers to questions 1 through 19 of the questionnaire. Table 4 depicts the statistical analysis of the issues related to the classroom environment in schools across Saudi Arabia as well as the importance of the role of the classroom environment in applying the SIOP model.

According to respondents of this study, the classroom environment in Saudi Arabia is conducive to activate and implement the SIOP model. The SIOP model provides the classroom environment with behavioral patterns that help teachers continuously improve their performance. The classroom environment in Saudi Arabia utilizes illustrative tools (dictionary, student books, etc.) and modern technology (e-education) and encourages building positive relationships between teachers and students. Such responses averaged between 4.11 and 3.66, with standard deviations ranging between 0.89 and 0.77. Previous research by Macías et al. (2012) supports the use of interactive tools and activities in students' learning.

Table 4
Application of the SIOP model and Classroom Environment in Saudi schools

No	Statement	Average	SD	Importance Level
1	The classroom environment encourages implementation of the SIOP model.	4.11	0.77	High
2	The classroom environment in schools provides social patterns to assist teachers in continuously improving their performance.	3.66	0.78	Medium
3	The classroom environment in schools provides illustrative tools and modern technologies.	3.71	0.85	High
4	The classroom environment has a role in building positive relationships between the teacher and the students.	3.82	0.98	High
5	The classroom environment provides cognitive and non-cognitive goals.	3.91	1.05	High

No	Statement	Average	_SD_	Importance Level
6	The classroom environment provides patterns of critical thinking.	3.54	1.10	Medium
7	SIOP implementation needs to focus on the student, not the curriculum.	4.08	0.83	High
8	A classroom environment requires an effective teacher.	3.11	0.89	Medium
9	Grouping students by age leads to a suitable classroom environment for English language learning.	3.72	0.68	High
10	The classroom environment - in your school - provides mutual respect.	3.86	0.82	High
11	The design of the classroom environment makes the SIOP model easier to implement.	3.44	0.97	Medium
12	The classroom environment in schools encourages conversation and communication in L2.	3.86	0.92	High
13	The classroom environment in schools makes it easy to apply the SIOP model in language teaching.	3.90	0.73	High
14	The classroom environment contains the material items (desks, chairs, smartboard, etc.) that are needed for language learning activities.	3.75	0.86	High
15	The classroom environment contributes to the acquisition of the four English language skills.	3.82	0.94	High
16	The classroom environment meets the requirements for implementing new English language vocabulary and adds to the professional growth of the teacher.	3.87	0.93	High
17	The location of the teacher is suitable for supervising the observation process inside the classroom.	3.87	1.08	High
18	The classroom environment in schools across Saudi Arabia enhances the capabilities of newly-graduated English language teachers.	3.44	0.99	Medium

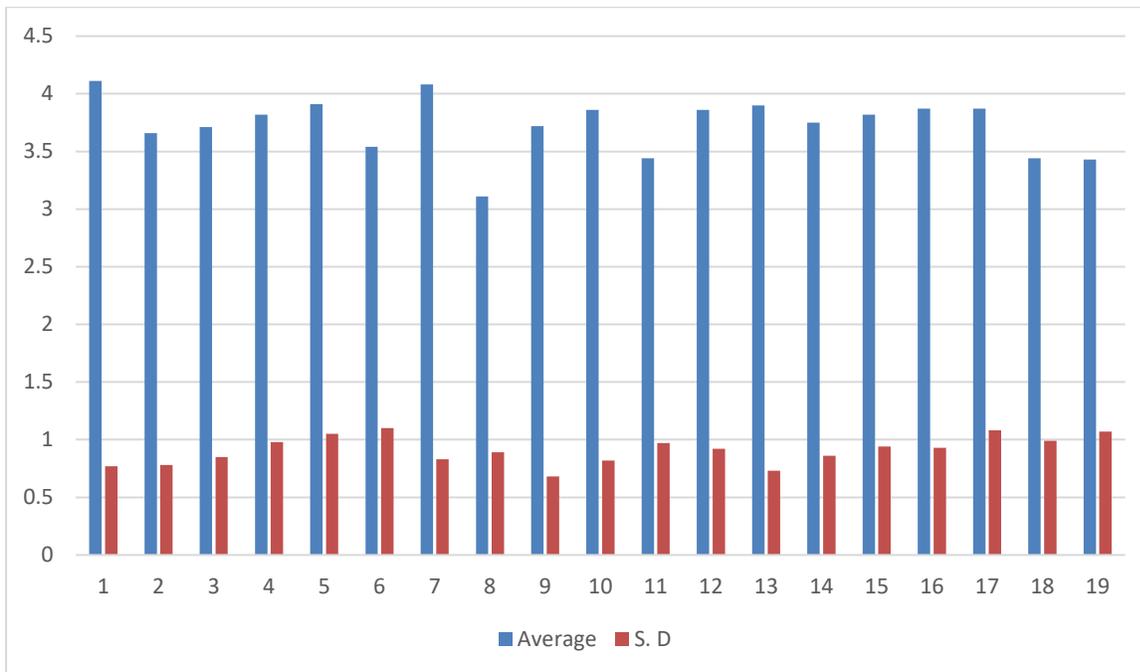| No	Statement	Average	SD	Importance Level
19	The classroom environment in schools across Saudi Arabia, through participation-observation and guidance, works to reduce the isolation of new teachers.	3.43	1.07	Medium
	Total	3.73	0.91	High

Figure 2. Classroom Environment

According to the respondents, the classroom environment in Saudi Arabia provides students with the opportunity to achieve cognitive and non-cognitive goals. The classroom environment, using participation, observation, and guidance, works to reduce the isolation of new teachers when applying SIOP. Such responses averaged between 4.08 and 3.11, with standard deviations ranging between 1.10 and 0.68. A one-sample *t*-test was performed to verify the statistical significance of the first hypothesis. Table 5 shows the first hypothesis test results.

Table 5
t-test Assessment of the First Null Hypothesis

Null Hypothesis 1	Tabulated *t* value	Calculated *t* value	Indication Statistical	*df*	Test result Hypothesis
No statistically significant differences between teachers when it comes to the classroom environment (as shown through	1.984	13.482	0.000*	299	Null H 1 is rejected

the views of the study sample at the (≥ 0.05 α) level of significance).

Table 5 shows that the calculated *t* value of 13.482 is higher than the tabulated *t* value of 1.984. The statistical indication is 0.000. The rule of decision indicates acceptance of the null hypothesis when the calculated *t* value is below the tabulated *t* value. Conversely, it means the null hypothesis is rejected if the calculated *t* value is higher than that of the tabulated *t* value. Accordingly, rejection of the null hypothesis 1 is shown.

The alternative hypothesis, which states that there are statistically significant differences between teachers when it comes to the classroom environment in Saudi Arabia, as shown through the views of the study sample at the ≥ 0.05 α level of significance, is accepted.

Second Hypothesis
Null hypothesis 2 tested statements 20 through 34 from the questionnaire. Table 6 shows the statistical analysis results of the problems related to the issue of the SIOP model.
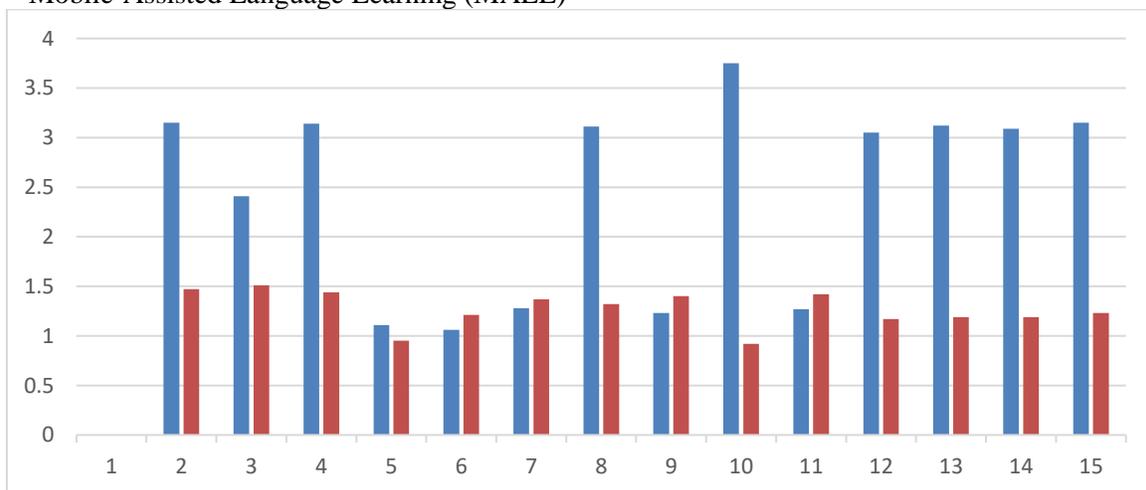
Table 6
Appropriateness of Applying the SIOP Model in General

No.	Statement	Average	SD	Importance Level
20	SIOP model implementation requires teacher effectiveness in classroom management.	1.08	1.32	Weak
21	Providing teachers with training courses before applying the SIOP model is useful in the success of the model.	3.15	1.47	Medium
22	Some teachers and researchers consider that the weakness of the curriculum is the reason for not applying the SIOP model successfully.	2.41	1.51	Medium
23	SIOP model implementation helps the training of teachers in educational and cultural psychology, language theory, and knowledge of scientific content.	3.14	1.44	Medium
24	The application of SIOP creates a culturally diverse classroom.	1.11	0.95	Weak
25	SIOP model implementation encourages students to use new content of English language knowledge practices.	1.06	1.21	Weak
26	The application of SIOP in Saudi Arabia needs legal support.	1.28	1.37	Weak

No.	Statement	Average	_SD_	Importance Level
27	The application of the SIOP model develops the teacher professionally, as it provides both language and content education.	3.11	1.32	Medium
28	The form of the SIOP model allows the teacher to teach students at different levels using different language skills.	1.23	1.40	Weak
29	The use of the SIOP model can handle large numbers of students in the classroom and within the school.	3.75	0.92	High
30	The SIOP model improves classroom management.	1.27	1.42	Medium
31	The SIOP model supports MALL* practice in the classroom.	3.05	1.17	Medium
32	The SIOP model accommodates gifted students in language learning.	3.12	1.19	Medium
33	The SIOP model overcomes the isolation students feel when using the Internet to learn language skills.	3.09	1.19	Medium
34	The SIOP model supports parameter behavior in the classroom.	3.15	1.23	Medium
Total		2.34	1.27	Medium

* Mobile-Assisted Language Learning (MALL)

Note: Numbers 1-15 above correspond to statements 20-34.

Figure 3. SIOP Model View

Table 6 shows that the responses to statements 20 through 34 had an average of 1.08 with a standard deviation of 1.32. Responses to statements 24, 25, 26, 27 and 30 had mean averages of 1.11, 1.06, 1.28, 1.23 and 1.27 respectively, with standard deviations of 0.95, 1.21, 1.37, 1.32 and 1.42 respectively.

This confirms the awareness of respondents regarding the implementation of the SIOP model in schools in Saudi Arabia. However, the views of the study sample demonstrate a low rate of approval from the respondents. This indicates that the application of the SIOP model in schools in Saudi Arabia is still in its initial stages; primarily regarding the availability of financial, material, and human capabilities necessary to implement it. This is confirmed by the responses to the queries of the third hypothesis, which emphasize the need for continuous improvement and development measures. At the same time, the responses of the respondents to the rest of the statements met with acceptance and an average level of importance, with the average ranging from 2.41 to 3.7, and the standard deviation ranging from 0.92 to 1.51. This confirms that the respondents are reluctant to agree to the implementation of the SIOP model.

This can be attributed to the lack of interest in continued education and training for teachers. The results from analyzing the data related to this hypothesis show, in general, that the respondents had a limited idea of what the SIOP model entailed. Thus, the mean of the combined questions reached 2.31, with a standard deviation of 0.68. A one-sample *t*-test was used to verify the statistical significance of the above results and to test the second hypothesis, as shown in Table 7.

Table 7
t-test Assessment of Second Null Hypothesis

Null Hypothesis 2	Tabulated *t* value	Calculated *t* value	Statistical indication	*df*	Test results
There are no statistically significant differences between teachers when it comes to applying the SIOP model in the classroom as indicated by the respondents at the level of considerable significance (≥ 0.05 α)	1.984	1.076	0.040*	299	Null H (2) is accepted

* The differences are not statistically significant at the level $0.05 \geq α$

Table 7 shows that the calculated *t* value is 1.076, which is less than the tabulated *t* value of 1.984, establishing the statistical significance between the teachers when it comes to applying the SIOP model in the Saudi classroom and, therefore, indicating acceptance of the second null hypothesis.

Third Hypothesis
Null hypothesis 3 states that there is no statistically significant effect of the applicability of SIOP through the classroom environment in schools as shown in Table 8. Null hypothesis 3 was tested using statements 35 through 51 from the questionnaire. Table 8 shows the statistical analysis results of items related to the possibility of applying the SIOP model in the classroom environment in schools in Saudi Arabia.

Table 8
The application of the SIOP model and Teacher Qualifications

No	Statement	Average	SD	Importance Level
35	Teachers have the basic teaching skills necessary to implement the SIOP model.	3.78	1.29	Medium
36	Teachers have clarity when applying the SIOP model.	3.02	1.46	Medium
37	Teachers have knowledge and awareness of the SIOP model.	3.11	1.48	Medium
38	Saudi teachers are familiar with the use of modern technologies to teach the English language.	3.46	1.39	Medium
39	If the SIOP model is applied to teaching the English language courses, there will be a significant cost to prepare teachers to understand the model.	3.16	1.49	Medium
40	The classroom environment in schools helps to teach the English language using the SIOP model.	3.88	1.36	High
41	Teachers can apply the SIOP model to teach English.	3.76	1.31	High
42	Teachers can analyze an SIOP model when teaching English.	3.04	1.43	Medium
43	Schools in Saudi Arabia have access to financial and non-financial resources to enable teachers to apply the SIOP model in teaching the English language.	1.08	3.92	High
44	Schools in Saudi Arabia are developing their information systems and databases.	1.39	3.89	High
45	Schools in Saudi Arabia have the authority to apply all strategies and models for teaching the English language.	1.32	3.74	High
46	Teachers are allowed to be creative in the classroom environment.	3.02	1.61	Medium
47	Schools rely on long-term plans to train teachers on curricula and teaching methods within the classroom environment.	3.34	1.32	Medium

No	Statement	Average	SD	Importance Level
48	Teachers can differentiate between strategies and models when teaching English.	3.33	1.32	Medium
49	Teachers can integrate students into the educational process creatively using various teaching methods to teach the English language.	1.48	3.42	Medium
50	Teachers seek to develop and improve the methods of teaching the English language with available capabilities.	1.28	3.95	High
51	Teachers are trying to reduce the cost of implementing the SIOP model.	1.31	3.98	High
Total		2.63	2.26	Medium
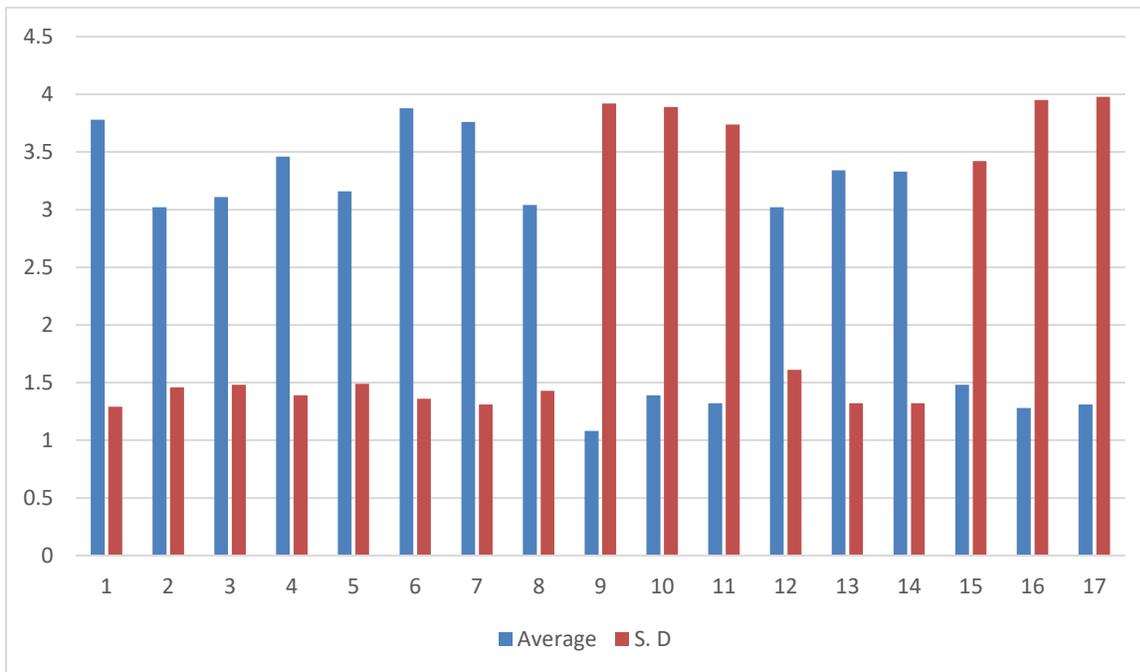
Note: Numbers 1-17 above correspond to statements 35-51.

Figure 4. SIOP Application Possibility

   Table 8 pertains to those statements regarding teachers having the skills and qualifications necessary to implement SIOP. It also addresses the application of advanced strategies, the clarity of application procedures, and the practical steps to use them. It provides insight into the teachers' knowledge and skills concerning the importance of using the SIOP model and of the advantages

in achieving the appropriate classroom environment. It also addresses the provision of vocational, educational staff based on procedures at various stages of the application of the SIOP model. It further reflects the financial and technical ability of the education system to utilize the requirements and capabilities of the SIOP model to achieve the English language teaching goals.

The results also emphasized the importance of the availability of measures to develop and improve performance in the short- and long-term levels as well as raise the parameters and level of excellence during the implementation stages. This is confirmed by the increase in the mean of the average questions combined, 2.63 with a standard deviation of 2.26. Statements 50 and 51 confirmed the interest of teachers in Saudi Arabia to develop and improve measures in methods of performance. These two statements had an average of 3.95 and 3.98 respectively, with a standard deviation of 1.28 and 1.31 respectively. A one-sample t-test was used for statistical significance verification of the results and to test the third hypothesis, as shown in Table 9.

Table 9
t-test Assessment of Third Null Hypothesis

Null Hypothesis 3	Tabulated t value	Calculated t value	Statistical indication	df	Test results
No statistically significant effect of the possibility of applying SIOP due to teacher qualifications in Saudi Arabia classrooms per the views of the study sample at the level of significance (≥ 0.05 α).	1.984	5.653	0.000*	299	Null H 3 is rejected

As indicated in Table 9, the calculated t value is 5.653, which is more than the tabulated t value of 1.984. The statistical significance is 0.000, indicating null hypothesis rejection.

Normal Distribution Test
Utilizing the responses of the sample members to confirm or deny the study hypotheses, the Kolmogorov–Smirnov test was used. It tested the extent to which the data followed a normal distribution. The significance level of the study variables was higher than that of 0.05. This indicates that the data follows a normal distribution. Table 10 shows the significant value for each hypothesis.

Table 10
Normal Distribution Test

Null Hypotheses	Significance
Number one	0.063
Number two	0.078
Number three	0.093

The overall study findings showed that optimal results concerning the implementation of the SIOP model have not yet been achieved. This might be due to the fact that teachers have never

been trained in the SIOP model in their course curricula and English-language teaching methods. Therefore, they are not familiar with the SIOP model.

Conclusion

Educational qualifications, career status, job experience and training courses are each of great importance for teachers when it comes to applying the SIOP model to the classroom environment in schools. Stakeholders have materialistic, technical and financial capabilities that make it possible to implement the SIOP model. Findings indicate that English-language teachers surveyed during the 2018/2019 academic year gave incorrect or other responses, which suggests that they did not have a good understanding of processes related to the classroom environment. Specifically, the level of the teachers' knowledge of the subject area ranged between 35–56%. This shows that 95% of the teachers cannot identify and distinguish between concepts related to the classroom environment.

Recommendations

The findings of the research emphasize the need to consider teachers' qualifications concerning the application of the SIOP model. Similarly, different awareness programs should be executed for better implementation of the SIOP methods. This research should prove useful for countries that apply the SIOP method; helping them to consider the many factors that affect SIOP application. Implementation of the SIOP model supports the Kingdom of Saudi Arabia's ongoing efforts to move away from a Western educational system and towards a more advanced, Arab system of English language learning - an improved and enhanced pedagogy with a compelling portfolio of proven academic benefits.

Based on this study's results, the importance of the classroom environment and the SIOP model for English language teachers is evident. Overcoming the difficulties that hinder the implementation of the SIOP model and applying the model properly are important tasks. The Saudi Ministry of Education could address these tasks by sponsoring the preparation and development of training explaining the SIOP model as it should be used in the classroom environment.

These findings suggest that the SIOP framework should be implemented at a sizeable school-based level, where teachers can familiarize themselves with it and understand it as a part of their academic responsibilities. Policymakers can also introduce coaching and mentorship programs for improving this study's results, extending language support services as well as creating subject-specific content for enriching the students' learning experience.

Limitation

Despite the significant results of this study, there exist certain limitations. The generalizability of this research is low, given its inclusion of only teachers in Saudi Arabia. This can be improved by performing more research on a population with different demographical characteristics. The study also suggests conducting more inquiries on this model, taking into consideration teaching facilities and the possibility of applying it to other scientific disciplines and in other countries. Future research can also explore the perception of the students and the impact of the teacher's training on the SIOP method.

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