مجلة البحث العلمي في التربية

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Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model

Dr. Amr Fathy Abdelwahab*

Abstract
Recently, studies have stressed the need to enhance teachers' professional development, particularly professional competence. Nevertheless, less research is conducted to fill the gap between theoretical knowledge and actual classroom practices. Therefore, this study aimed at investigating the effect of using the sheltered instruction observation protocol (SIOP) model on EFL student teachers' professional competence. To fulfill this purpose, 48 EFL student teachers enrolled in the third year, English Section at the Faculty of Specific Education, Zagazig University were chosen as the study sample. They were divided into two equal groups: an experimental group (n=24) and a control one (n=24). To obtain data collection, a pre-post professional competence observation checklist was designed to assess students' level before and after treatment. Findings revealed that the experimental group surpassed the control one in the overall professional competence and its dimensions, i.e. knowledge and understanding, skills, and dispositions. Data analysis also revealed significant improvement in the first two dimensions.

Keywords: SIOP model; sheltered instruction; professional competence; student teachers.

Introduction
Teachers play a vital role in creating more learning opportunities that provide interaction with their students and engage them in an insightful learning process. When initiating and supporting the teaching-learning process, teachers can effectively assist students in achieving the specified pedagogical objectives (Kennedy, Ahn & Choi, 2008). However, EFL teachers seem to lack the necessary skills for planning instruction, considering the interactive nature of the classroom and the unpredictability of classroom discourse and students' responses (Elfers & Stritikus, 2014). Obviously, EFL teachers may encounter different challenges and difficulties in teaching content knowledge, language and pedagogical skills. This means that they need to develop their professional skills in order to overcome the complexity and diversity of classroom settings.

According to Hu (2005) and Rich (2014) English language instruction should be prioritized in order to meet the increased mobility, integration, and developments in online...
communication. Another reason for prioritizing English language instruction is the shortage of qualified EFL teachers who are able to successfully implement various strategies and practices of English language and who are equipped with the knowledge, skills, behaviours and attitudes required to apply their tasks effectively. Riding and Rayner (2012) pointed out that this pedagogical preparation has proven to have a positive effect on students’ achievement especially their language development. It also enhances the understanding of the ways by which students respond and accomplish different learning tasks, affects individuals' cognitive styles, and increases learning performance.

Recently, studies have affirmed the need to develop EFL teachers' professional development, especially their professional competence (e.g., Komila, 2019; Liakopoulou, 2011; Nhu, Loi & Thao, 2016). However, Andreas (2016, p. 27) concluded that the investigation of teachers' professional competence is in its early stage. Further research is needed to examine the multifaceted nature of professional competence. Additionally, Guerriero (2017, p.173) added that the term can pose quite a challenge for educational researchers. These challenges involve what type of competences necessary for teachers' professional development, what evidence is sufficient to measure such competences, and which competencies are necessary for a certain outcome. Moreover, a number of studies have shed light on the separation between teacher education development and actual classroom practices (e.g., Agbayahoun, 2018; Hagger & McIntyre, 2006; Jin, Li, Meirink, van der Want, & Admiraal, 2019).

In this context, EFL teachers may encounter problems in order to manage their classrooms, adapt their teaching practices to students' level, support students' engagement during classroom tasks and activities, and provide relevant and appropriate learning opportunities. Ideally, the ultimate aim should be to apply theoretical knowledge and skills in a practical context. Well-structured pedagogical and content knowledge, along with good and sufficient knowledge of students' prior experiences, are necessary for EFL teachers to cope with the changing, everlasting pedagogical demands.

Due to the aforementioned gap between theoretical knowledge and actual classroom practices, EFL teachers, especially pre-service ones, may lack the ability to handle complex classroom situations or solve unexpected problems (Ulvik, Smith & Helleve, 2009). In addition to the potentials of encountering such difficulties, pre-service teachers often experience "practice shock". This means that teachers at this stage are likely to find that the teaching profession is frustrating and more difficult than expected (Flores & Day, 2006). Besides, studies have affirmed that this situation may cause students to neglect their individual professional development and lose their enthusiasm for the teaching-learning process (e.g., Buchanan, 2010; Chang, 2009; Santoro, 2018). These findings warrant further investigation.

Considering the different difficulties that hinder student teachers' professional level and their commitment to work effectively, it is worth investigating how to develop student teachers' professional competence. Ideally, helping student teachers achieve learning
objectives and create engaging teaching and learning tasks in the classroom is considered a key factor of teaching. Hence, EFL teachers are required to adapt their teaching to specific models and approaches that are necessary for achieving these outcomes and that are most likely to be efficient and effective. Besides, they need to adjust the level and pace of content in order to help EFL learners grasp content knowledge and promote their understanding of the subject. Therefore, much prominence needs to be given to employing new methods that ensure students' success.

Being developed over a seven-year research study, the sheltered instruction observation protocol (SIOP) was developed through collaboration with teams of teachers and researchers to determine the best teaching and learning practices and to organize certain techniques to develop a sheltered instruction model (Short, 2013). According to Salcedo (2010), the SIOP model is an educational approach that provides the opportunity for continual reflection, fosters the integration between knowledge and discipline, presents guidelines for putting theory into practice, enhances interactions among peers and educators, and gives practical experience to solve different pedagogical problems. Moreover, through emphasizing different aspects of knowledge, skills, and values, EFL teachers are expected to be encouraged in their pursuit of professional development and higher qualifications.

Successful teaching, from this perspective, depends mainly on comprehensive and well-structured domain-specific knowledge that can be transferred through pre-service and in-service teacher training. Consequently, teaching can be considered as an occupational field requiring intensive and specialized training, special skills, exchanging theoretical knowledge and sustainable development of knowledge.

Context of the problem

To make sure of the study problem, a pilot study was conducted on a random sample of 45 student teachers of the English section at the Faculty of Specific Education, Zagazig University during the academic year 2019/2020. A professional competence observation checklist was administered to the students. It was found that 78% of the students obtained very low scores. They lacked the necessary pedagogical knowledge (e.g., teaching and learning theories, student motivation, class management and lesson planning) in order to address the different classroom demands. They could not deal with classroom complexity, utilize different instructional methods, nor adjust the pace of teaching to the pupils' level.

Analysing the actual practices of secondary education teachers, Liakopoulou (2011) revealed that 66% of teachers face difficulties while practicing teaching. It was found that 3 out of 4 teachers face challenges concerning utilizing new technology, designing activities and adopting pedagogical theories. More than 50% of teachers said that they find it difficult to assign tasks to students and plan lessons. Adapting methodology and content teaching to students' needs seemed to be frustrating, posing challenges for them. Based on qualitative data collection including interviews and classroom observations, Agbayahoun's (2018) study aimed at investigating the practices and the structure of EFL teachers' preparation and
Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model

knowledge base. Findings revealed limited implementation of curriculum goals and instructional practices. It was also indicated that there was a wide gap between EFL teachers' preparation and their pedagogical practices. In their investigation of EFL in-service teachers' professional competence, Pangguna, Wello, Jabu & Macdonald (2018) chose a random sample of 31 high school EFL teachers from both public and private schools. Data obtained from questionnaires revealed that most of the teachers did not obtain high levels of professional competence. The study reported that EFL teachers should obtain knowledge about teaching competence, especially professional competence. It also suggested the need for a training model for improving EFL teachers' professional competence, as well as utilizing various professional development activities.

Statement of the problem

The problem of the current study could be stated in the low level of EFL student teachers' professional competence. Hence, the study attempted to answer the following questions:

1. How can the SIOP model be utilized to develop student teachers' professional competence?
2. What is the effect of using the SIOP model on the development of student teachers' professional competence?

Hypotheses

1. There is a statistically significant difference between the mean scores of the experimental group students and those of the control group in the post administration of the professional competence observation checklist favouring the experimental group students.

2. There is a statistically significant difference between the mean scores of the experimental group students in the pre-post administration of the professional competence observation checklist favouring post-administration results.

Significance of the study

The current study is expected to establish standards for professional competence that can be used as an essential part of student teachers' assessment. The standards can also form a guide for educators and curriculum planners when designing and approving teacher preparation programs, as well as when identifying their needs of professional development. This would help in establishing a broad view of student teachers' professional development that encompasses a combination of different aspects (i.e., knowledge, skills and dispositions). Such aspects are necessary for EFL teachers to be equipped with in their pursuit of professional development. The study is also expected to provide insights into how to utilize the various features of the SIOP model through designing a comprehensive and well-structured framework that might fill the gap between theoretical knowledge and actual
Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model

classroom practices, which may guide teachers to develop their teaching practices and assist students to better understand the content and retain information. Additionally, this may help them present lessons that meet the intended outcomes and utilize different strategies and activities that extend content learning and enhance the development of language skills.

Definitions of terms

Sheltered instruction observation protocol

It is a research based and validated instructional delivery model that represents the best practices for high quality teaching and learning to EFL learners and introduces an explicit framework for planning and organizing teaching and learning practices. It also encompasses eight interrelated components: lesson preparation, building background, comprehensible input, strategies, interaction, practice and application, lesson delivery, and review and assessment (Echevarria & Graves, 2010).

SIOP model can be operationally defined as a comprehensive instructional framework which is utilized to plan and organize various teaching and learning practices that make new content information comprehensible for third year English section students. It involves planning lessons, activating and building background knowledge, making the content comprehensible, employing different strategies, promoting students' interaction, practicing and applying content and language knowledge, supporting students' understanding of new knowledge, reviewing key concepts, and assessing students' progress.

Professional competence

According to Caena (2013, p. 10), professional competence involves the conscious use of knowledge, skills, motivation, values, attitudes and personal characteristics, which help teachers to act appropriately and professionally in order to achieve the desired outcomes in a teaching situation.

Professional competence can be operationally defined as the utilization of a wide variety of knowledge, skills and dispositions; which empowers third year English section students to perform appropriately and professionally in various teaching and learning situations.

Review of Literature

The term "competence" has been narrowly viewed as comprising only cognitive aspects. Following this perspective, competence is considered as a cognitive achievement which varies according to the context and which is acquired through learning to cope with demands within specific domains (Klieme, Hartig & Rauch, 2008). Conversely, the broader view of the concept refers to the personal capacity to adapt to and cope with certain situational demands. It combines a wide variety of aspects (e.g., intellectual abilities, cognitive skills, content knowledge, domain specific-strategies, social behaviours and
motivational tendencies) into a complex system. Hence, this system determines the prerequisites necessary to fulfill the requirements of a particular profession (Mulder, 2014, p. 111).

Professional competence comprises the knowledge and skills, as well as the attitudes and motivational factors, which are necessary for a specific teaching situation (Kunter et al., 2013). Thus, the term involves not only cognitive and practical skills but also encompasses dispositions (beliefs, values, motivation and emotions. Consequently, EFL teachers need to deploy different cognitive and psycho-social resources in a coherent way in order to deal effectively with complex demands. Generally speaking, professional competence can be considered as a conscious planned process that starts at pre-service teaching and ends at retirement and that is directed to enhance the quality of classroom education. It is a lifelong process through which EFL teachers can acquire and develop their knowledge, understanding, skills and beliefs so as to obtain better professional practices.

According to Blömeke and Delaney (2014), professional competence comprises two main elements: professional knowledge and teachers' affective-motivational characteristics. Teachers' professional knowledge involves knowledge of the content area, pedagogical content knowledge (knowledge of teaching and learning the content), and general pedagogical knowledge (involving high quality teaching). On the other hand, affective-motivational characteristics involve teachers' beliefs about content, teaching and students' learning, as well as teachers' motivation and self-evaluation. Such characteristics affect teachers' ability to take decisions and can predict the quality of instructional practices (Kunter et al., 2013). Caena (2013, pp. 45-46) pointed out that teachers' competences often encompass three main domains: knowledge and understanding, skills, and dispositions (beliefs, attitudes and values). Such domains need to be adapted in order to reflect the context in which teaching occurs, and need to be action-oriented in order to provide practical applications for teachers' work. When implementing these domains, educators need to bear in mind the education level, the cultural context and the stated purpose.

In his review of teachers' competence and pedagogical problems, Orgoványi-Gajdos (2016, p.18) concluded that EFL teachers need to develop a wide variety of knowledge types: (a) professional theoretical knowledge (including psychological and pedagogical facts; knowledge about the teaching-learning process; and knowledge about students' needs); (b) professional practical knowledge (including teaching practices, classroom situations and communication with colleagues and peers); and (c) knowledge of the self (including personality, professional aims, points of professional strengths and weaknesses). Additionally, teachers' competence implies the development of a range of thinking and professional skills, as well as motivational factors (e.g., beliefs about the teaching-learning process and attitudes towards one's role as a teacher). To Bransford, Darling-Hammond, and LePage (2005), teachers are required to recognize three main dimensions of knowledge, i.e. knowledge of learners' development in the social context, knowledge of the subject and curriculum goals, and knowledge of teaching within the context of professional practice.
Developing EFL Student Teachers’ Professional Competence through the Sheltered Instruction Observation Protocol Model

Focusing on the knowledge required for teachers' competence, Guerriero (2017, p. 85) distinguished between two main types of knowledge in teacher education: declarative and procedural knowledge. The former is "specific content knowledge" involving cognitive processes (including conceptual and scientific knowledge and domain-specific theories). It refers to the theoretical knowledge that teachers need to acquire through formal training during college years and throughout their career. The latter includes cognitive activities and practices that are strongly related to skills and behavioural acts. It refers to the practical knowledge necessary for teachers to deal with professional problems and the complexity of classroom situations. Similarly, Hong, Pi, and Yang (2018) emphasized the presence of the two types of knowledge in the learning-teaching process, and that both declarative and procedural knowledge affect effective learning.

Teachers' knowledge, whether declarative or procedural, is a key component of professional competence. Such knowledge involves two main domains that form the base on which instructional methods and approaches are formed: (a) domain-specific knowledge, and (b) domain-general knowledge (Baumert & Kunter, 2013). The first domain involves content knowledge (CK), that is knowledge of the subject matter, pedagogical knowledge (PK), that is knowledge of teaching and learning processes, and pedagogical content knowledge (PCK), that is knowledge of tasks, learning contexts and learners' prior knowledge (Caena, 2013). On the other hand, domain-general knowledge covers aspects of shaping the teaching-learning process, managing classrooms, general knowledge of learner development, and assessing students' performance and their professional behaviour (Baumert & Kunter, 2013).

In teaching-learning situations, there is a transition from declarative knowledge (knowledge of what to do) to procedural knowledge (knowledge of how to do). Declarative knowledge is retrieved through selecting, evaluating, and then rejecting or accepting, whereas procedural knowledge is retrieved through matching and executing (Macaro, 2005, p.44). In the context of teaching, the actions taken by learners are considered to transform from declarative to procedural knowledge. Although procedural knowledge takes less space in the working memory than that of declarative knowledge, it plays a vital role in accessing knowledge productions. However, once learners' actions become automatized, a considerable effort needs to be taken to modify the proceduralized actions (Lyster, 2007). To Marzano (2007), procedural knowledge is directed towards skills, strategies or processes and can be developed in different ways other than declarative knowledge. In the long run, procedural knowledge is shaped by learners through adding, changing or deleting actions. When completely developed, procedural knowledge is automatized and its processing becomes controlled.

However, the dominance of these types of knowledge and the gap between them in teaching are still a subject of debate among researchers. EFL teachers tend to focus on using practical knowledge rather than acquiring theoretical knowledge. They claim that such knowledge is practice-oriented and closely related to problem solving (van Velzen, Volman, Brekelmans, & White, 2012, p. 24). It should be noted that teacher preparation programs...
Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model

should aim at bridging the gap between conceptual and procedural knowledge. It is also clear that teachers' needs and responsibilities are considered a complex issue, which makes it necessary to develop a set of knowledge, skills, values and attitudes necessary for effective teaching.

As an integral part of teacher education, the competence of EFL teachers, particularly professional competence, is a necessary requirement for teachers' professional development (Caena, 2013). Nevertheless, literature review on teacher education and competence has revealed that EFL teachers appear to have different levels of professional competence. This may be due to differences in individual characteristics (e.g., cognitive abilities, experiences, patterns of behaviour and motivational tendencies) or may be caused by differences in qualifications. Accordingly, successful teachers need to develop certain cognitive characteristics, enhance their pedagogical skills and extend their content knowledge (Feldon, 2007; Nhu et al., 2016; Pangguya, Wello, Jabu, & Macdonald, 2018). Owing to the complexity of the situation inside the classroom, it has been necessary to strengthen the level of teachers' professional competence including the quality of pedagogical practices, the implementation of effective strategies, and the exploitation of meaningful experiences. EFL teachers need to be more flexible and adjust their teaching methods and behaviours to meet the needs of individual students, especially when dealing with different situational demands. They should also be equipped with knowledge and expertise, particularly regarding the flexibility of thought, high level of content knowledge, and effective problem-solving skills. In addition to professional knowledge, EFL teachers need to focus on psychological aspects, such as values, beliefs and motivation. Consequently, successful mastery of teachers' professional competence requires not only knowledge about the teaching-learning process, but is also affected by teachers' motivational and affective factors. Such factors serve as a key component of EFL teachers' professional competence.

Hence, teachers are required to effectively initiate and manage the learning process, integrate both formative and summative assessments, cope with individual differences, manage and share leadership, enhance students' thinking, make effective use of technology and various strategies in teaching, and build community partnerships (Abdelwahab, 2020; European Commission, 2012). Ideally, teachers need to help students not only acquire the knowledge and skills necessary for their success but also develop ways of thinking, increase collaboration, use information communication technologies, and enhance social and life skills.

Despite much prominence given to professional competence development, previous studies have not investigated its different aspects: knowledge and understanding, skills and dispositions. In addition, the gap between procedural knowledge and declarative knowledge was not addressed. For instance, Liakopoulou (2011) conducted a survey on 727 secondary stage teachers in order to investigate their professional competence. The aim was to find out the necessary qualifications for teachers in order to successfully carry out their pedagogical and didactic work. A six-point Likert scale and open-ended questions were used to collect data. Descriptive statistics, correlations and qualitative analysis were carried out to present the data. Findings indicated that teachers put much importance on their pedagogical and didactic
Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model

training. Additionally, personality traits and knowledge of the subject were considered as essential qualifications for effective professional competence. Based on qualitative and quantitative research methods, Nhu et al. (2016) examined the factors affecting secondary and high school teachers' professional competence. The sample involved 235 teachers chosen from three provinces of Tay Nguyen in Vietnam. Results showed that six factors were found to affect teachers' professional competence, including professional environment, facility and building, factors related to students, factors related to teachers, teachers' linguistic ability, and compensation policy. More importantly, the factors related to teachers had the greatest effects, whereas the compensation policy had the lowest one. It was also noted that teachers' professional competence had a significant impact on the quality of teachers' education. Investigating the impact of EFL teachers' professional competence on students' education, Komila (2019) chose a random sample of 30 students from preparatory classes divided into two groups (15 students in each). Both groups were pre-tested to determine their pre-level. The experimental group was taught by a teacher who had and practiced professional competence during the teaching-learning process, whereas the control one received regular instruction. The groups were post-tested after completing the intended lessons and tasks. Results showed that professional competence had a positive effect on students' educational level, involvement and motivation.

The multi-faceted and complicated roles of teachers on multiple levels (i.e., student level, classroom level, school level and community level) have led to the development of instructional practices and models that help teachers integrate new knowledge, adapt their learners' needs, and utilize different resources (Caena, 2013, pp 30-31). Recent research asserted the need to utilize the sheltered instruction observation protocol (SIOP), as a key model that addresses the challenges faced by teachers, for enhancing the professional development of EFL pre-service or in-service teachers (Ebedy, 2019 and Short, Fidelman, & Louguit, 2012). The model was initially utilized as an observation instrument to measure teachers' implementation of sheltered instruction techniques and then evolved into a framework for lesson planning and delivery (Vogt, Echevarría, & Short, 2010). Figure 1 shows the various applications of the SIOP model and its evolution. The lesson planning guide was used by teachers to implement the model, whereas researchers utilized the protocol to measure implementation fidelity of the SIOP model.
The model provides access to cognitively challenging materials through making lessons comprehensible and meaningful for foreign language learners. It also gives students the opportunity to acquire the target language as well as master a wide variety of skills and content. The features underlying the exploitation of this model include promoting the acquisition of subject content knowledge and target language development. Consequently, when teachers utilize sheltered instruction in presenting lessons, they can assist students to meet the linguistic and cognitive demands of the learning process with innovative and high quality instruction (Echevarria & Graves, 2010). According to Genesee and Riches (2006), the model provides opportunities to teachers to make use of curricular content concepts, exploit strategies and techniques, and make the information comprehensible and engaging to the students. It also combines various features for effective and high-quality instruction such as, reading comprehension strategies, cooperative learning and differentiated instruction. Hence, EFL teachers can accommodate English language development and the academic needs of the students through incorporating language and content objectives, enhancing background knowledge, and emphasizing academic literacy.

The SIOP model can be utilized as a guide for planning and delivering lessons effectively, a self-reflection tool for teachers, a means for making the content meaningful and comprehensible for learners, and an instrument for observing lessons by teachers or peers (Vogt et al., 2010). However, despite the importance of this validated instructional model, it is rarely studied in the context of professional competence development. Turkan and Buzick (2016, p.8) explained that the model comprises 30 features of instruction which are grouped into eight interrelated components: lesson preparation, building background, comprehensible
input, strategies, interaction, practice/application, lesson delivery, and review and assessment. These eight components form the basis of successful instruction.

The first component, lesson preparation, focuses on displaying and reviewing content and language objectives. The objectives should be accurate, clearly defined, and displayed both orally and on board (Echevarría, Vogt, & Short, 2010, pp 25-27). Supplementary materials (e.g., hands-on manipulative, realia, pictures, visuals and multimedia) are introduced to the students in order to participate actively in the lesson. Content and key concepts are chosen and taught to the students (Short, 2013, p.120). Students are, therefore, trained to obtain a plan at the beginning of each lesson, which helps them stay focused on their goals.

Once the lesson preparation component is accomplished, teachers connect newly taught concepts to their students' past knowledge and experiences. This component is important as students may be unfamiliar with the cultural references within the text (Echevarria et al., 2010, pp 55-61). Emphasis is also placed on building and expanding a good vocabulary base (e.g., content words that are associated with a certain topic and functional language words that are used to make requests, justify opinions or make conclusions) (Short, 2013, p.120 & Carlo et al., 2004).

In the third component, comprehensible input, teachers are required to adjust the information presented to their students' proficiency level. If teachers present information in a way that does not accommodate students' understanding of the content, many students will be unable to learn the material or comprehend concepts (Crossley, Louwerse, McCarthy, & McNamara, 2007). This can be fulfilled through using language that is adjusted to the students' needs and appropriate to their proficiency level. Paraphrasing, restatement and repeating key words are also essential techniques to enable students to fully comprehend the message (Echevarria et al., 2010, pp 81-84 & Short et al., 2012). Teachers need to expose students to appropriate language patterns and varied sentence structures that support students' academic language. At the same time, they should not also use very simple language that is inadequate and below the level expected for the students.

The fourth component involves learning strategies, scaffolding techniques and higher-order questioning. Teachers should provide students with ample opportunities to exploit appropriate strategies (e.g., predicting, summarizing, organizing, categorizing, problem-solving, self-monitoring, evaluating). Students need to be taught how to use a variety of strategies flexibly and in combination, rather than using a single strategy (Ardasheva & Tetter, 2012).

In the fifth component, interaction, teachers are required to emphasize the development of English language skills and academic language through engaging students in meaningful interactions. Besides, providing ample opportunities for students to work in pairs or small groups helps them deepen their content language and develop new language functions (Echevarria et al., 2010, pp 117-119). In order to enhance students' oral interaction, teachers should focus on the quality of exposure to the oral language not just the
quantity. It is clear that using thoughtful questioning and discussions moves students to a higher level of proficiency and a deeper understanding of the lesson.

The sixth component stresses offering students the opportunity to practice new language through hands-on materials, pair and group work, assignments, and projects. It is true that activities that encourage students to put concepts and content knowledge into practice promote language development (Echevarria et al., 2010, pp 141-145 and Fisher & Frey, 2013). SIOP teachers, therefore, need to choose activities and plan tasks carefully in order to master the content and develop higher levels of language proficiency. They should also take into consideration the difficulty and the structure of the task, the type of the feedback offered after each task, and the expected outcomes.

According to the seventh component of the SIOP model, teachers support content and language objectives of the lesson. They need also to ensure the level of students' understanding and the degree to which the information is clearly presented, which helps them to process new concepts and knowledge easily and efficiently (Echevarria et al., 2010, pp 158-161).

In the last component of the SIOP model, teachers are required to provide time for revision and assessment throughout the lessons. Review is made, normally at the beginning of the lesson, to check students' knowledge of the new topic, which involves a comprehensive review of key content concepts and vocabulary. Further, assessments are conducted to determine students' understanding of the content and lesson objectives. Feedback is regularly introduced to students on their output (e.g., language, responses, work) to check whether they need more explanation or practice (Echevarria et al., 2010, pp 171-175).

Previous studies have affirmed the need to utilize the SIOP model in the field of English language learning. However, none of these studies investigated the development of professional competence using the SIOP model. For instance, Short et al. (2012) studied the effect of SIOP model instruction on middle and high school EFL learners' academic language performance. Over two years, the study was conducted in two districts in northern New Jersey. Students' outcomes were measured using the New Jersey assessment of English language achievement. Results showed that the treatment student group achieved significantly higher mean scores on writing, oral language, and total English scores of the Language Proficiency Tests. It was concluded that the SIOP model improved the quality of instruction to the learners and increased their level in English language. In her attempt to develop reading comprehension skills, Ebedy (2019) utilized the SIOP model among sophomore English majors at the Faculty of Foreign Languages and Translation. Sixty-eight students, divided into two equal groups, participated in the study. A pre-post reading comprehension test was designed and validated by experts to measure the students' level in reading comprehension. The experimental group received instruction using the SIOP model, while the control one received regular instruction. The findings showed that the experimental group students surpassed those of the control one in reading comprehension skills.
To conclude, effective teachers should have the capability to integrate subject content, pedagogy, and learners' knowledge, to efficiently equip students with knowledge and skills necessary for their educational growth, and to organize and adapt various topics and issues in order to address the different pedagogical demands of EFL learners. Similarly, the deep understanding of learners' individual needs, abilities, achievement and learning styles is an essential step for teachers to assist students to be effectively engaged in the learning process and take the responsibility for their own learning.

### Methodology

#### Participants

Forty-eight student teachers enrolled in the third year, English section, Faculty of Specific Education, Zagazig University were involved in the study. This sample was chosen since at this stage, they are required to develop the knowledge, skills and attitudes necessary for effective teaching and learning. They were randomly assigned to either experimental or control group: each consisting of 24 student teachers. Additionally, a sample of 150 primary stage pupils was selected and taught by the student teachers. In order to assure the groups' homogeneity, the participants were at the same average age: ranging from 20-21 years old. Pre-testing also revealed no significant difference between the mean scores obtained by the two groups in the professional competence and its components: knowledge, skills and dispositions.

<table>
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<th>Group</th>
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<th>Mean</th>
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T-value is not significant at (0.01) level

#### Study design

The study aimed at investigating the effect of the SIOP model on student teachers' professional competence. Hence, the quasi-experimental design was adopted, where two groups were assigned: the experimental group receiving instruction using SIOP model and the control one receiving regular instruction. The experiment lasted for three months during the first term of the academic year (2020-2021). Both groups were exposed to the professional competence observation checklist before receiving the instruction to make sure that both groups were homogeneous in terms of their level of professional competence. The same version of the checklist was post-administered to investigate any significant differences after the instruction.
Instrument

To answer the study questions, a pre-post professional competence observation checklist was designed (See Appendix A). The checklist was submitted to a panel of jury of specialist and experts in the field of TEFL to determine its validity. They were asked to evaluate the checklist in terms of wording, clarity and suitability for the students' level. The checklist was also piloted on a sample of 27 students other than the study participants to determine the clarity and suitability of the items. The test-retest method was used to determine the reliability by calculating the internal consistency with two weeks interval (alpha coefficient = 0.86). In its final form, the checklist comprised three dimensions, i.e. knowledge involving nine items, skills involving six items and dispositions involving five items. In addition, the student teachers were observed by the researcher and two EFL instructors prior to and following the intervention. The scoring of the checklist ranged from "1" point to "5" points, i.e. always = "5" points, usually = "4" points, often = "3" points, rarely = "2" points, and never = "1" point.

Study material

In order to develop pre-service students' professional competence, six units based on the sheltered instruction observation protocol were designed (See Appendix B). The suggested units aimed at:

1. Developing pre-service teachers' professional competence in terms of knowledge, skills and dispositions.
2. Identifying the different features of the SIOP model that support instruction and professional development.
3. Identifying how the SIOP model can be utilized to develop professional competence.
4. Providing opportunities for the students to apply the sheltered content instruction strategies and activities as key elements for effective instruction.

Content of the units

The content of the units was designed on the basis of the eight components of the SIOP model and in terms of the specified objectives. It included six units comprising a variety of tasks and activities.

Unit one: introduction

In this unit, a general overview of the SIOP model was presented to the students. The main components of the model were also introduced and the features included in each component. This stage was intended to help students get familiar with the model and the features included in each component.

Unit two: lesson preparation and building background knowledge

The purpose of this unit was to adapt the content to the students' proficiency level so as to help them acquire necessary knowledge about grade-level concepts and skills. This
Developing EFL Student Teachers’ Professional Competence through the Sheltered Instruction Observation Protocol Model

could be achieved through using different supplementary materials, study guides, graphic organizers, taped texts and jigsaw reading. Students were also engaged in authentic discussions about the specified objectives, e.g. what they meant and how they will be achieved. Additionally, students' newly learnt concepts were connected to their past knowledge.

**Unit three: comprehensible input and strategies**

In this unit, students were trained on how to clearly deliver the message, make content comprehensible to pupils and allow them to interact and practice the language. This could be achieved through engaging students in activities that clarify key concepts, using a variety of questioning techniques, using language that is appropriate to pupils' level, and providing peer support. Additionally, students employed different strategies that enhanced comprehension and learning new materials. Such strategies included summarizing, thinking-aloud, previewing, predicting and elaboration. Further, a variety of question types (e.g., literal, inferential, analytical, interpretive, or creative) were used to promote students' higher-order thinking skills.

**Unit four: interaction, practice and application**

The focus of this unit was to provide opportunities for students to interact with one another, enhance elaborated responses, and actively discuss different information and ideas; as well as to apply new content and language knowledge. Through practicing meaningful activities, they could clarify ideas, negotiate meaning and make themselves understood. Distributing copies of the conversation grid worksheet, the instructor guided the students to be involved in authentic, cooperative conversations. Having completed the previous tasks, students were asked to share their experiences about visiting different places.

**Unit five: lesson delivery, review and assessment**

At this stage, students were encouraged to support the content and language objectives during the lesson. They were asked to discuss the content of the lesson and discover the language using guided discovery problems. Additionally, hands-on activities were employed to reinforce students' learning and keep them actively engaged. Using think-pair-share activities, students were provided with appropriate pace and time to process new concepts and information. Additionally, students were engaged in activities to review key concepts and vocabulary. They could relate new words to previously learnt words and concepts. Providing different types of constructive feedback, the instructor could draw the attention of students to using appropriate verb tenses and correct sentence structures. Finally, students practiced performance task assessments to assess pupils’ progress and comprehension.
Unit six: SIOP model lessons

Students, at this stage, were given copies of sample lessons. They were asked to apply the eight steps of the SIOP model in their teaching. The instructor asked the students to answer questions representing the eight steps of the model. Students were then asked to work in groups and discuss their answers. Distributing copies of the SIOP template, the instructor guided the students to fill in the necessary information. Finally, students were asked to provide feedback on each other's work.

Results

In the light of the study hypotheses, the results of this study were presented. Paired and independent samples t-test were employed to analyze data using the Statistical Package for Social Science.

Testing the first hypothesis

The first hypothesis states that there is a statistically significant difference between the mean scores of the experimental group students and those of the control group in the post administration of the professional competence observation checklist favouring the experimental group students. To test the first hypothesis of the study, t-test for independent samples was used to determine any significant differences.

Table 2. t-test results of the experimental group and the control one in the post administration of the professional competence observation checklist

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t. Value</th>
<th>DF</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>24</td>
<td>36.5417</td>
<td>2.5018</td>
<td>19.58333</td>
<td>46</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Cont.</td>
<td>24</td>
<td>16.9583</td>
<td>4.27815</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>24</td>
<td>24.5833</td>
<td>2.28257</td>
<td>13.20833</td>
<td>46</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Cont.</td>
<td>24</td>
<td>11.3750</td>
<td>3.80860</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispositions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>24</td>
<td>20.7500</td>
<td>1.70038</td>
<td>11.00000</td>
<td>46</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Cont.</td>
<td>24</td>
<td>9.7500</td>
<td>2.59179</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>24</td>
<td>81.8750</td>
<td>5.26937</td>
<td>43.79167</td>
<td>46</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Cont.</td>
<td>24</td>
<td>38.0833</td>
<td>8.78198</td>
<td></td>
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<td></td>
</tr>
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</table>
Table 2 indicates that the experimental group surpassed the control one in the overall professional competence and its dimensions. The experimental group's mean scores for knowledge, skills and dispositions were 36.54, 24.58 and 20.75 respectively. Conversely, the control group obtained lower mean scores for each dimension. The t-value for the overall professional competence (43.791) is statistically significant at (0.001) level. Therefore, the first hypothesis is accepted.

**Testing the second hypothesis**

The second hypothesis states that there is a statistically significant difference between the mean scores of the experimental group students in the pre-post administration of the professional competence observation checklist favouring post-administration results. To test the second hypothesis of the study, t-test for paired samples was used to determine any significant differences.

**Table 3.** t-test results of the experimental group in the pre- and post- administration of the professional competence observation checklist

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t. Value</th>
<th>DF</th>
<th>Sig.</th>
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</thead>
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<tr>
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<td>13.8333</td>
<td>3.19873</td>
<td>48.917</td>
<td>23</td>
<td>0.000</td>
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<td></td>
<td>Post</td>
<td>24</td>
<td>36.5417</td>
<td>2.50181</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Skills</td>
<td>Pre</td>
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<td>10.0833</td>
<td>2.93282</td>
<td>41.934</td>
<td>23</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>24</td>
<td>24.5833</td>
<td>2.28257</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispositions</td>
<td>Pre</td>
<td>24</td>
<td>8.3333</td>
<td>2.07818</td>
<td>45.104</td>
<td>23</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>24</td>
<td>20.7500</td>
<td>1.70038</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Pre</td>
<td>24</td>
<td>32.2500</td>
<td>7.48477</td>
<td>74.092</td>
<td>23</td>
<td>0.000</td>
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<tr>
<td></td>
<td>Post</td>
<td>24</td>
<td>81.8750</td>
<td>5.26937</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 indicates a significant difference between the means of the experimental group in the pre- and post-testing favoring the post-testing in the overall professional competence and its dimensions. The t-value for knowledge, skills and dispositions (48.91, 41.93, 45.10) are statistically significant at (0.001). The t-value for the overall professional competence (74.09) is statistically significant at (0.05) level. Therefore, the second hypothesis is accepted.
Discussion of Results

This study aimed to investigate the effect of the sheltered instruction observation protocol model on EFL student teachers' professional competence. The findings indicated that the SIOP model is promising in developing experimental group students' overall professional competence and its dimensions, i.e. knowledge, skills and dispositions. Additionally, the experimental group students surpassed those of the control one in all professional competence dimensions, with significant improvement in the first two dimensions, i.e. knowledge and skills. This improvement could be due to the explicit instruction of the different features of the SIOP model. The experimental group students were trained on how to effectively plan lessons that comprise both content area objectives and language objectives. Well-planned lessons allowed student teachers to make connections between their background knowledge and experiences, on the one hand, and the new knowledge being taught, on the other. They could determine the baseline of their pupils' understandings. Hence, they could enhance their knowledge of the subject content and their language skills.

The instruction using the SIOP model is also characterized by using supplementary materials, such as manipulatives, graphs, models and visuals. Such materials were utilized to support and enhance pupils' understandings. Student teachers were trained to reinforce information using audio-visual and computer-based resources or adapting related texts and illustrations. Thus they could make information accessible to their pupils, taking into account their proficiency levels of English language. For example, some pupils may find it suitable to use audio-visual materials, while others may be able to utilize graphics, models or illustrations. Utilizing different supplementary materials effectively in the classroom, student teachers could also allow their pupils to be engaged actively in the teaching-learning process. Additionally, student teachers were trained, throughout the SIOP instruction, on how to adapt the content (e.g., assignments and text) to their pupils' proficiency level. This promoted student teachers' necessary knowledge base, skills and professional attitudes for lifelong learning, as well as paved the way for effective professional competence development. Moreover, they could develop their academic success through SIOP model key features, such as the inclusion of content and language objectives in every lesson, activating pupils' background knowledge, the development of content knowledge, and emphasizing academic literacy practices.

Besides enhancing professional theoretical knowledge including pedagogical facts, knowledge about the teaching-learning process, and knowledge about pupils' needs, student teachers could increase their professional practical knowledge involving teaching practices, classroom situations and communication with colleagues. During the teaching-learning process, they mastered the transition from declarative knowledge to procedural knowledge. This transition helped them acquire the knowledge of what to do and how to do. They could select, evaluate, and then reject or accept tasks and actions within the content of teaching, which helped them deal with complex and demanding situations.
Ideally, the SIOP model allowed student teachers to choose from a wide range of strategies and techniques such as, graphic organizers, visuals, modeling, hands on activities, demonstrations and cooperative learning. This helped them in making the content comprehensible as well as developing their language. Ample opportunities were given to them in order to practice interactive strategies, such as thinking-aloud, questioning the author, and question-answer relationship. This helped them in accessing background knowledge before reading, monitoring comprehension while reading, and enhancing classroom discourse. Consequently, they demonstrated their ability to deal with difficult and unexpected problems while reading a text or performing other cognitively demanding tasks. They could also gain experiences in practicing meaningful and authentic tasks, which helped them stay focused on the task.

Student teachers in the experimental group could actively participate in different classroom discussions and collaborative tasks through meaningful interactive activities. They had ample opportunities of interaction and discussions, whether between them and their pupils or among themselves. Thus, they could elaborate on different difficult points in the lesson, ask for clarifications about key concepts, apply both content and language knowledge, integrate language skills, provide peer support, and practice new language. Practicing a wide range of meaningful interactive activities helped them to reflect upon their experiences in the light of different views.

The tasks presented throughout the teaching units helped student teachers to meet the needs of individual pupils, increase the production of pupils' language through oral or written interaction, and pay their attention to how the language is used and how it supports learning. Besides, they could promote communication by encouraging group work, asking and answering questions, clarifying ideas, and fostering elaborated responses. Furthermore, planning activities that accommodate to the pupils' auditory, visual and kinesthetic learning preferences helped student teachers to provide a non-threatening environment for the pupils and make them feel comfortable while accomplishing the tasks. Generally, SIOP instruction assisted students to consider pupils' needs, which allowed them to enhance appropriate behaviours and good communication patterns. Using different types of assessments (e.g., performance-based assessments, hands-on activities, oral reports, observation checklists, written assignments, quizzes), student teachers could check their pupils' understandings and language development. This helped them enhance pupils' levels and lead them to mastery. Moreover, providing regular feedback on pupils' outputs assisted in clarifying and correcting misconceptions.

Hence, applying the different features of the SIOP model provided the experimental group student teachers with the core knowledge, skills and dispositions upon which they could develop their professional competence. The systemic practices of the SIOP model enhanced their learning and allowed them to have opportunities to further develop their competences. The SIOP model was conducted not as a step-by-step technique that could be carried out in one classroom session, rather it involved an awareness of the subject content language and the knowledge of how to exploit the best teaching practices during classroom
Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model

period, as well as a combination of different tasks and techniques. Thus, it served as an umbrella, allowing student teachers to be flexible in choosing techniques and strategies they find suitable for their pupils and to pay their attention to the pupils' language development needs.

This result is supported by Batt (2010) and Short et al. (2012) who affirmed that SIOP instruction is effective in promoting students' teaching skills and fosters their engagement, whether with the teacher, with one another or with the text.

On the other hand, the control group student teachers lacked the necessary knowledge, skills and dispositions to promote pupils' learning and enhance their engagement. They lacked the ability to form content and language objectives, choose content concepts appropriate for pupils' level, link new material to pupils' background knowledge, give feedback, and provide supplementary material to support learning. Additionally, they were not able to plan meaningful activities that integrate language skills (reading, writing, listening and speaking). They focused mainly on teaching isolated words and grammar rules, without paying attention to the knowledge, skills, values and attitudes that allow them to achieve the desired outcomes. They also neglected promoting effective discussions whether with pupils or with the text. Discussions comprised only of mere question-answer sessions in which one or two pupils gave a brief answer. Very little writing assignments, mostly through answering questions in textbooks, were conducted in class.

Conclusions and pedagogical implications

The present study focused on utilizing the SIOP model to develop student teachers' professional competence. Findings showed that the model had a positive effect on experimental group student teachers' professional competence, particularly their knowledge and skills. Based on this result, teacher education programs should provide EFL student teachers with the core knowledge, skills and dispositions of professional competence which support them to pursue challenges throughout their career. Such combination of knowledge, skills and dispositions is important for student teachers to be able to deploy all the necessary competences that help them be effective in school and the classroom. Besides, systemic programs of support need to be incorporated, especially using the SIOP model, during the first years in the profession so as to further develop student teachers' competences. EFL teachers, whether pre-service or in-service, should also be engaged in a continuous process to assess and develop their professional competence. This may be an effective tool to motivate teachers in order to stay in their profession and to be qualified for teaching and leadership positions. Moreover, student teachers' professional development should not entail just attending a course that comprises a wide range of learning activities. It is important for student teachers to reflect upon their teaching practices in the light of various theoretical views and experiment with innovative approaches. Thus, student teachers need to be involved in professional programs that cover a wide range of professional development activities that reflect all levels of professional competence and take into account the outcomes of research on teaching and teacher development.
Suggestions for further research
In the light of the present study, the following topics seem worth attempting:

1. Further research is needed to find out how the SIOP model affects students' reflective teaching.
2. Investigating the effect of the SIOP model on the acquisition of EFL learners' language and content concepts.
3. A case study to investigate EFL instructors' perceptions to the SIOP model and its impact on English proficiency is needed.
4. Investigating the impact of the SIOP model on teachers' self-efficacy in teaching primary stage pupils.
5. Further research is needed to investigate how differentiated instruction based on the SIOP model affects English language learners' academic literacy development.
6. A study can be conducted to investigate the effect of online training of the SIOP model on student teachers' professional development and altitude towards teaching English language.

References


Developing EFL Student Teachers' Professional Competence through the Sheltered Instruction Observation Protocol Model


تنمية الكفاية المهنية للطلاب المعلمين بشعبة اللغة الإنجليزية باستخدام نموذج بروتوكول الملاحظة للتدريس المحمي (SIOP)

عمرو فتحي عبدالوهاب
مدرس المناهج وطرق تدريس اللغة الإنجليزية
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المستخلص

يهدف البحث الحالي إلى تقصي أثر استخدام نموذج بروتوكول الملاحظة للتدريس المحمي (SIOP) لتنمية الكفاية المهنية للطلاب المعلمين بشعبة اللغة الإنجليزية بكلية التربية النوعية، وتتألف عينة البحث من (48) طالباً وطالبة تم تقسيمهم إلى مجموعتين (تجريبية N = 24، وضابطة N = 24)، وتمثلت أداة البحث في بطاقة ملاحظة الكفاية المهنية لقياس مستوى الطلاب قليلاً وبعدياً في الأبعاد الثلاث للكفاية المهنية (المعرفة و المهارات و القيم). و للحصول على البيانات و تفسيرها تم استخدام كلاً من التحليل الكمي و الكيفي. و توصلت نتائج الدراسة إلى وجود فروق ذات دلالة إحصائية بين متوسطي درجات المجموعتين التجريبية و الضابطة في نتائج بطاقة الكفاية المهنية لصالح طلاب المجموعة التجريبية.

الكلمات المفتاحية: نموذج (SIOP); التدريس المحمي; الكفاية المهنية; الطالب المعلم.

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