# How to Incorporate Language Form, Function, and Structure in the SIOP Model Lessons

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Received: June 7, 2022 Accepted: July 6, 2022 Online Published: July 18, 2022

doi:10.5430/ijelt.v9n2p8 URL: https://doi.org/10.5430/ijelt.v9n2p8

#### **Abstract**

The paper looks at the current practice of CBI (Content-Based Instruction) and the Sheltered Instruction Observation Protocol (SIOP) Model as dominant methodological approaches of teaching a foreign or second language (FL/SL) and proposes some useful teaching strategies for the development of L2 skills not only in the public school system of the USA but for similar teaching environments in other countries where English is a medium of instruction of at least a few content subjects. The paper specifically addresses the difficulties many in-service and novice teachers experience during the SIOP lesson planning to come up with meaningful language teaching objectives in order to facilitate learning of both content and all four basic language skills such as reading, writing, listening, and speaking (Bautista & Castañeda, 2011, Bigelow & Ranney, 2005, among others). The main proposal of the paper on how to advance these skills is informed by the best practices of teaching and learning that follow English Language Development (ELD) standards of certain states and International TESOL standards. With these guiding documents and teaching principles drawn from a variety of reputable sources, the paper offers some hands-on strategies and teaching scenarios that could potentially enhance the focus on linguistic form, function, and structure during content lessons to facilitate L2 learning, and this focus includes word decomposition skills that are instrumental in vocabulary learning and complex syntactic structures such as passives during teaching Social Studies and Math lessons. The paper will be useful for both inservice teachers and teacher candidates who are preparing to deliver sheltered courses of various subjects in schools such as Math, Science, Social Studies, Language Arts, and so on. The paper also touches on the division of labor between content teachers and ELS professionals on how they need to collaborate to be able to better serve L2 learners at the various stages of L2 skill development.

Keywords: SIOP model, CBI, language objectives, language form, function and structure

#### 1. Introduction

Content-Based Instruction (CBI) has been around for quite some time now, and it refers to an approach in which teaching is organized around the content or information that students need to acquire, rather than around a linguistic or other type of syllabus (Richards and Rogers, 2001, p.204). Essentially, this approach builds on and develops all four language skills through teaching various content subjects such as math, science, where the main focus of the instruction is on the attainment of content area objectives. However, throughout the initial years of teaching L2 learners with this approach, it became clear that in order for students to be successful in content subjects they need to master language objectives to the same extent as content ones. Thus, in late 1990s, it became essential to incorporate language teaching objectives in every science, math, or any other subject taught at school. Therefore, the SIOP Model emerged as a framework for teaching not just ELLs (English Language Learners) in the USA (Echevarria, Vogt, and Short, 2017), but mainstream students at public schools whose native language is English. The need for planning language objectives during content lessons required better prepared teaching professionals for executing the dual task of teaching both content and language. The SIOP Model became a popular approach of teaching in various countries where English is a medium of instruction of at least a few subjects (Inceli, 2015; Kareva & Echevarria, 2013; among others). In schools where even a few ELLs are enrolled, it is necessary to implement all eight components of the SIOP Model to ensure that every child has an equal opportunity to acquire academic literacy and advanced language skills during their

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formative years at school.

Given the above background of the SIOP Model and CBI, the main goal of the paper is to propose a teaching model of a Social Studies and Math lessons, which will incorporate some of the eight SIOP principles to illustrate how language form, function, and structure can be included in planning and executing of these lessons.(Note 1) The paper will also provide a guide on how to enhance language objectives during lesson planning process so that ELLs have a better uptake of language structures and functions in their everyday learning situations.

The rest of the paper is organized as follows: Section 1.2 reviews the literature on the SIOP Model, Sections 2.1 and 2.2 propose the model lessons in Social Studies and Math where the principles of this model are implemented, and Section 3 concludes the paper.

## 1.1 The SIOP Model and Its Objectives

This section gives a brief outline of the SIOP model and its 8 components along with the background information on how language form, function, and structure have been incorporated in science and other subjects. To start with, EVS (2008) define the SIOP as a model of teaching whose primary goal is to scaffold ELLs in a variety of school contexts by implementing eight basic lesson parts listed here for convenience:

(1)

- a. lesson preparation
- b. building background;
- c. comprehensible input;
- d. strategies;
- e. interaction;
- f. practice & application;
- g. lesson delivery;
- h. review & assessment (Echevarria, Richards-Tutor, Canges, & Francis, 2011).

According to the above breakdown of the lesson delivery and structure, the focal point of lesson preparation includes a clear explicit statement of language teaching objectives, which should be read out loud at the beginning of the lesson. Every student should be aware of these objectives and how they will be achieved by the end of the lesson or study unit. Besides the clear statement of language objectives at the beginning of the lesson plan, these objectives also require explicit instruction while delivering content material, including procedures such as modeling, explanation of learning strategies, oral production activities with support and feedback, as well as assessment (Klinger, et al., 2012). Typically, content objectives identify what students will learn in the lesson, while language objectives address the aspects of academic language which will be developed and reinforced. As mentioned above, language objectives should be read aloud at the beginning of the lesson so that both teacher and students understand the lesson's purpose, and these objectives will be reviewed at the end of the lesson to determine whether they were met or not (Himmel, Short, Richards & Echevarria, *HSRE*, 2009, p.2). HSRE recommend to implement the following four steps the teachers can take to create language objectives by following EVS (2008), Chapter 2:

(2)

- a. Decide what key vocabulary, concept words, and other academic words students will need to know in order to talk, read, and write about the topic of the lesson. Those words must be taught as a language objective.
- b. Think about the language skills necessary for students to accomplish the lesson's activities. For example, will students be reading a textbook passage to identify the stages of *mitosis*? ... Acquiring the skills necessary to carry out various content tasks might be the focus of language objective;
- c. Identify grammar and language structures common to the content area. For example, many science textbooks use the *passive voice* to describe the processes... writing with the passive voice or comparative phrases might be a language objective;
- d. Consider the tasks that the students will complete and the language that will be embedded in those assignments. If students are working on a scientific investigation together, will they need to explain the steps of the procedure to one another. The language objective might focus on how to explain procedures aloud (HSRE, p.2).

HSRE provide the lesson sketch for a science topic, which includes only four parts of a typical eight-part SIOP lesson

starting from learning the new vocabulary, providing frequent opportunities for interaction between students, on the one hand, and student-teacher interaction, on the other. At the next step of review and assessment, the researchers embed formative assessments for the same topic, and these forms of assessment identify the murky areas of content that need to be clarified, explained, or revisited. With the example of Word Splash (Ur & Wright, 1989), they illustrate how the teacher can assess the students' uptake of a new vocabulary. However, the article does not discuss the summative assessment for the unit that can be a more substantive measure of student learning such as a short essay or even a quiz, or anything of this nature. Overall, in planning of any content lesson, the researchers demonstrate how the observations on the form, function, and structure of academic language can facilitate the higher achievement on both content and language objectives.

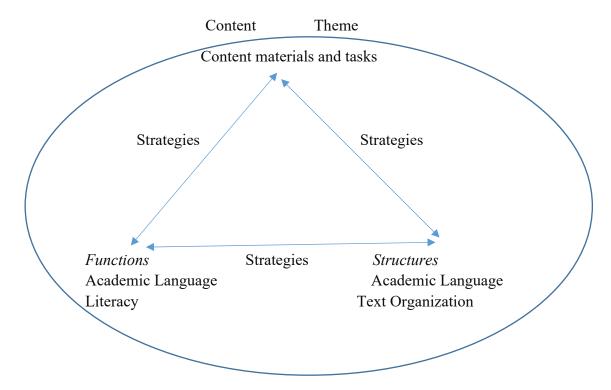
Furthermore, this paper proposes that in-service teachers regardless their area of teaching should be prepared to not only teach their own content subject but efficiently plan for language objective in every lesson plan. The implementation of this requirement for teacher training programs is not too far-fetched because the most robust curriculum of teacher preparation programs in the USA and other countries includes at least one introductory course in Linguistics to increase the future teachers' awareness about language form, function, and structure along with pragmatics and other areas of language. On the other hand, it is not a secret either that many students in teacher training programs dread the only linguistics class they need to take throughout their training (Freeman & Freeman, 2014). Many researchers have emphasized the need of pedagogical language knowledge (PLK), which pre-service teachers need to achieve as a part of their training programs (Andrews, 2006), and this knowledge includes three main areas to make teaching of L2 attractive and engaging for students:

(3) a. metalinguistic awareness (Knowledge about language's systems and structures), b. Knowledge of learners second language learning processes, and c. pedagogical content knowledge, all three comprising teacher language awareness (TLA, Andrews, 2006). The above three components of TLA can be achieved through teacher training curriculum which along with the content area knowledge will emphasize the need to teach just one foundational course in Linguistics, which will include the topics from all three areas of TLA mentioned above.

It should also be noted that Bigelow, Ranney, & Dahlman (BRD, 2006)'s focal point is to avoid "the stark" division of language and content by "formulating contextualized language objectives and ensuring that they are addressed in the lesson procedures" (p.42). This means that mere reading of passages containing the observable grammatical features such as conditional sentences is not enough for learning the complex structure of tense in conditional sentences. Neither teaching of grammatical form and function of unrealistic actions expressed in some conditionals is a plausible strategy during the planning of content lessons, but rather students should be given multiple opportunities to "accidentally notice" the formal properties of various types of conditionals, which may not even be explicitly used in a given content text. Therefore, the proactive planning of language objectives should include not just the structures that actually appear in the text, but more importantly teachers should go beyond this text and support student language learning with hypothetical scenarios, which can be developed based on the given text. The example of content text that they give is The Arctic Transect (2004) about the experience of Inuit people who live in the polar regions of Canada and Eastern Greenland and are daily challenged by living in some of the worst climactic conditions on the Earth. During the lesson planning process, BRD suggest to include the discussion points which can elicit some of the hypothetical survival techniques that students themselves might need if they are faced with the necessity of survival in similar conditions. Such hypothetical scenarios can be expressed with the conditional sentences of the type: "If I were stranded in the Arctic, I would need shelter" (p. 51). According to the paper, practicing language within this scenario would help ELLs to further their skills about conditionals.

Following Larsen-Freeman (2001) and Celce-Murcia & Larsen-Freeman (1999), BRD sketch the following triangle to represent all three components of language objectives (language form, function and structure) with learning strategies as connecting devices involved in various language tasks:

## (4) The Connectionist Model (BRD)



**Figure 1.** The Connectionist Model Connecting Language Form, Function, Structure/Materials and Learning Strategies

The triangulation of language teaching material alongside language function and structure is very similar to the model where the language form is the first element to be observed in any given text. (Note 2) The strategies that connect language form, function, and content tasks have come into focus of language educators after Chamot & O'Malley (1994) and Chamot, et al. (1999), Oxford (1990) introduced these strategies as part of lesson planning process and urged to include them along with the language teaching materials and objectives. The so-called *Connectionist Model* utilized in this paper also includes language learning strategies as part of the proactive lesson planning process and will be factored into every lesson plan that teaches language objectives. In what follows below, it is shown how an ESL professional in collaboration with content teachers should design language objectives so that these objectives greatly enhance ELL language awareness and moves them from low levels of language competence to an advanced step-by-step.

#### 2.1 The Analysis of Language Form, Function, and Structure in Social Studies Lesson

Since morphological analysis of various words is one of the basic skills in acquiring second language literacy and the ability to recognize the patterns of various affixes in English, it is important to continue teaching these skills at a higher level of school curriculum when students increasingly encounter new academic vocabulary and more complex words. The next example for the development of morphological knowledge comes from the following excerpt drawn from Martin Dugard's book on British explorer David Livingston and American journalist Stanley titled *Into Africa: The Epic Adventures of Stanley and Livingstone*:(Note 3)

(5) Livingstone didn't emerge *unscathed*. The continent had insinuated itself into his appearance, giving him bearing and presence, set him apart from other men. The narrow face with hound dog eyes become taut, *furrowed* and *tanned* from day after day squinting into the sun. His Scottish burr had an African inflection and his lips struggled to form English sentences after years of wrapping themselves around Bantu's many dialects. Hookworm thrived in his belly. He was chronically anemic. And of course, there was a famous left arm, permanently *crooked* after a lion bit deep and shook Livingstone like a rag doll. Not only Livingstone survived the mauling with a *preternatural* calm, but also set the bone and sutured eleven puncture wounds himself, without anesthetic. Later he said that his time in the lion's jaws was an *epiphany*. He'd learned a secret that made him unafraid of death. (p. 4)

The above excerpt can be used to highlight several morphological phenomena as well as vocabulary knowledge, all of which fall under the language form, function, and structural analysis. The book can be used in the 6<sup>th</sup> grade Social Studies class and with the help of the TESOL professional the text can be analyzed for *word families* that have common formal properties, the function of free and bound morphemes within the members of word families, as well as roots and affixes. In addition to the above points, the excerpt can also further students' knowledge of inflectional affixes such as *-ed* and their function. In what follows, these points are explained one by one. The language objective for the unit or a lesson discussing this topic can be formulated as in the following: *Students will practice to decompose the members of word families into constituent morphemes and gain understanding of free versus bound morphemes in words*.

First, observe that four denominal and deverbal adjectives in (5) form a word family due to the affixation of the -ed to a lexical morpheme, which is Root in all these instances. A teacher should lead students to break up all four words highlighted with the italics in (5) as stated below for convenience:

- (6) Word Family and derivational analysis
  - a. Unscath-ed- adj.  $\rightarrow$  adj.
  - b. Furrow-ed-  $n. \rightarrow adj$ .
  - c. Tann-ed-  $v. \rightarrow adj$ .
  - d. Crook-ed-n.  $\rightarrow$  adj.

Each word in (6) is derived from the lexical morphemes such as roots that initially may function as adjective (scathing), noun (furrow) in (6b), verb (tan) in (6c), and noun (crook) in (6d). By adding the suffix -ed to the root word, this suffix either changes the word category or does not, but those words that don't change the category will have a different meaning as a result of affixation. For example, the addition of the -ed to 'crook' changes the word category from noun to adjective, and the suffix also changes the meaning of the Root into having a certain property expressed by the Root. The distinction between noun and adjective Roots in crook-n vs. crooked-adj can be used to explain the function of the suffix -ed not just as the marker of the past tense or past participle but also as a derivational affix because it changes one category of the word into another (Contemporary Linguistics, CL, p.132). The same function of the suffix -ed (Note 4) can be analyzed in (6a-b-c). In all four adjectives, after the suffix -ed is added to roots, the latter are transformed into the complex words that have different meaning as well as function in any given sentence. In addition to derivational vs. inflectional distinction, the teacher may also draw the attention to the free vs. bound morpheme contrast in these complex words since ELLs may not be familiar with these notions. Lexical morphemes such as *furrow*, tan, and crook, etc. are free morphemes, but SCATH- is not free because it requires the additional -ing to be able to function as a free morpheme: scathing. The affix -ed is always a bound morpheme because it should lean to the Root to be able to express grammatical meaning. As it was shown above, this affix can be either inflectional when it marks the past tense or past participle, while in the excerpt in (5) the same affix is derivational as it changes category and meaning of the words it attaches to.

The same excerpt from Dugard's novel can also be used to teach semantic peculiarities of several words that may not be familiar both for mainstream students and ELLs. For example, the expression "his Scottish burr had an African inflection" may be confusing due to the polysemous meaning of the word 'inflection' and not so clear interpretation of 'burr' is various online dictionaries. Webster's New World Dictionary defined "burr' as "the trilling of r" (p.59), indicating the opposite property of English Retroflex r sound. The teacher should explain that trilling is always associated with Spanish r sound as in perro ('dog') to make the meaning of the word burr clear. However, 'inflection' can be interpreted as a grammar term as used in that context but in fact it also means 'A change in the tone of voice' according to Webster (p. 222). Thus, the sentence should be explained as a change in Livingstone's Scottish pronunciation and the tone of voice due to his learning of Bantu languages and dialects throughout his lengthy travels in the African mainland. After the above explanation, the students will become familiar with the phonetic properties of /r/ sound in various languages and grasp Livingstone's path as a second language learner himself.

Additional linguistic features worth of noticing in (5) are several complex and foreign words such as 'preternatural' and 'epiphany.' This word consists of two morphemes: preter + natural in which the initial 'preter'- expresses the meaning of 'beyond' or 'above' when added to another Root 'natural'. The affix preter- is not productive in English occurring only in a handful of words such as 'preterite', which is a grammar term for past tense in certain languages. The teacher should simply lead the students to analyze the form of the complex word 'preternatural' as consisting of two morphemes both of which can be independent free morphemes. The word formation process involved in the

building of the complex word *preternatural* can be *compounding* because both morphemes in this word can stand on its own as free morphemes and mean "beyond or above natural, super-natural." For the functional analysis of 'preter-', it can be shown to the students that it is a preposition added to the adjective root 'natural' as a prefix and similar words include but are not limited to the following: over-look, under-estimate, super-impose, and many more all consisting of the preposition and Root (noun or verb). The decomposition strategies discussed above are well-known in psycholinguistics literature and can be productively used during content lessons for learning new vocabulary (Coughlin & Trembley, 2014, Zimmerman, 2014 among others).

Another word of interest in (5) is 'epiphany' which has a Greek origin and religious meaning referring to the Christian feast day commemorating the revealing of Jesus as a Christ to Gentiles (Webster). By using this word in the context it occurs, Dugard shows the degree of super-human qualities Livingstone possessed as an explorer and how these qualities elevate him above the mortal status of typical humans. Livingstone came to terms with the death because during those times Africa was hardly known to Europeans with numerous dangers posed to travelers by nature. With one word like 'epiphany', students learn about Livingstone as a fearless individual, a true hero who would meet lion's mauling as an epiphany, i.e. with super-natural composure and endurance.

In addition to the vocabulary analysis demonstrated in the above, students should be given ample opportunities to use this new vocabulary in creative ways and new contexts as the SIOP Model affords to teach. For example, a hypothetical scenario of traveling through Africa in 19<sup>th</sup> century can be imagined as a possible way for using a newly-learned vocabulary, and students should be given an opportunity to express their own issues in those hypothetical situations with the words they learned from Dugard's novel. This can be done through a collaborative writing assignment that can be completed in class after which students will read their own samples in groups of three and four and provide feedback to each other.

With the above analysis of language form, function, and structure, students learn how to observe language form which is the very first component of Larsen-Freeman (2001) and Celce-Murcia & Larsen-Freeman (1999)'s model of language teaching. This was expanded by (BRD (2006) into the Connectionist Model as shown in (2). The above analysis explained the formal properties of deverbal and denominal adjectives and other structures with the decomposition analysis of words into the constituent morphemes. Furthermore, these morphemes have been analyzed based on free vs. bound morphemes and inflectional vs. derivational classes. The latter classes can be roughly considered as a functional analysis of words in which students learn to notice different functions of affixes and ultimately the meanings of words and entire utterances. In addition to form and function, the above lesson encompassed a few but important features of academic language, language-specific polysemy and the distinction between various meanings of words such as 'inflection' and 'epiphany.' The discussion above did not touch on the teaching strategies of the above components due to space reasons though.

### 2.2 Teaching the Passive Voice through Fractions in 5rth Grade Math Lesson

Another overarching structure which always poses challenges to ELLs is the passive voice, which is illustrated with the Math lesson in this paper. *Ohio's Instructional Guidelines and Resources for ELs* (based on ELP standards, 2015) mentions the passive structure in the seventh grade of middle school, standard 3 for English Language Arts when a teacher assigns a summary of the book read earlier. This standard is formulated as follows: "An ELL can speak and write about grade appropriate complex literary and informational texts and topics" (p.103). The challenges of teaching fractions due to its prolific use of passive constructions are also noted both for ELs and mainstream students in 4<sup>th</sup> grade (Diaz-Rico, 2014). Diaz-Rico quotes Carrasquilo & Rodriguez (2002) who say that students may be confused by the following jargon: "Nine is divided by three," or "Thirty is represented by one-half of sixty" (Diaz-Rico, p.136). Common Core Standards puts a greater stress on ELLs by expecting them to use "journal entries and other kinds of writing to write about their math knowledge. This places an increased stress on English learners, as they are expected to learn math verbally as well as numerically in a second language" (Diaz-Rico, p.137).

During the lesson on fractions, teachers should make sure that children already have the background knowledge of adding, subtracting, multiplying, and dividing. It is also to the advantage of students if before the fractions' lesson they have a brush-up on how the passive works at the syntactic level. The text on fractions here is intended to be taught by an ESL professional who will pre-teach this topic so that the math (content) teacher can focus on content-related objectives such as word problems and the examples of fractions themselves. The following type of background on passive structures obtained in the ESL class will be helpful for children to easily transition to passive structures used in the Fractions Textbook for 5<sup>th</sup> Grade:

(11) "A FRACTION is a number that represents a ratio or division of two numbers. A fraction is written in the form  $\frac{1}{2}$ .

The number on the top *a* is called the *numerator*. And the number on the bottom is *Denominator*. The denominator tells how many equal parts there are, for example, pie parts; the numerator tells how many equal parts *are taken*. For example,  $\frac{5}{8}$  is a fraction whose numerator is 5;

Denominator is 8; it represents taking 5 of 8 equal parts, or 5 divided by 8;" (Rosenberg, 2004, p.9).

## (12) Word Problem 1:

There is one big pie in the picture and David ate 3 pieces of this pie in 4 days. How do you express how many pieces David ate?

Total 4 pieces will be the denominator while the number of pieces David ate will be numerator:  $\frac{3}{4}$ 

(13) Illustration of word problem in (12)



Figure 2. 4-Piece Pie Illustrating Word Problem in (12)

## (14) **Word Problem 2**:

"If a pizza has 8 pieces how many pizza pies *have been eaten* at a party where 35 pieces *were eaten*? Since 35 pieces were eaten, we should divide 35 by 8 to determine how many pieces *were eaten*:

$$\frac{35}{8} = 4\frac{3}{8}$$
 (Rosenberg, p.11-12).

This paper shows how vocabulary/verbal knowledge related to passive constructions can scaffold students' uptake of verbal aspects of math language used in the above text, and after mastering the verbal side the understanding and mastery of the numerical side will naturally follow, making this task easily comprehensible to 5<sup>th</sup> graders. To meet this end, an ESL teacher should make sure every student understands the words like *numerator* and *denominator* marked with italics in the above text, as well as the following passive constructions: "A fraction *is written* in the form", "5 *is divided* by 8," "a *is called* the numerator," etc. The numeral or fraction in the subject position of these sentences should be divided by students who are completing the math task, and that they understand the relationship between the numerator and denominator is the same as in the corresponding division:

$$(7) \frac{5}{8} = 5:8$$

The right side of this equation is a familiar notation that can be expressed with the passive structure in which the grammatical subject (one who is dividing 5 by 8) is not visible in the passive sentence, and the active counterpart of this passive sentence can be stated as the following:

(8) a. Passive: 5 is divided by 8

b. Active: Carol/Ethan divided 5 by 8.

This sentence is paraphrased into the passive in the textbook because explicitly stating the actor/agent (Carol or Ethan) is not important in this sentence (Bullock, et al., 2014). This kind of explanation of the passive structure will make other passive constructions in the passage easily comprehensible for ELs such as *is called*, 5 *divided by* 8 in which AUX is dropped; or *thirty is represented by...*, etc. The teacher can assign the exercise in which students will express fractions with the division using colon as a division mark rather than dash used in fractions. At the next step, the teacher will again draw the students' attention to the formal properties of passives by asking the class to collaboratively discuss the following fill-in-the-gap exercise:

**Passive transformation**. Put the verb in the parenthesis in the appropriate passive form:

| (9)   |   |  |
|---|---|--|
| a. Dana swiftly solved the word proble          | em on fractions for her math homework.                      |  |
| b. The word problem on fractions (be) homework. | swiftly (solve)   | by Dana for her math                     |
| (10)  |   |  |
| a. John ate 3 pieces of a pizza (leave) out of  | pie, which was cut into 14 pieces. 14 pieces?               | How much of the pizza pie was            |
| b. 3/14 of the pizza pie (be)                   | (eat) by Jo   | ohn.                                     |
| (11)  |   |  |
| a. Theo used 48 Lego pieces to build a (use)    | a robot. The kit contained 142 Lego piece to build a robot? | es total. What part of Lego pieces (be)  |
| b. 48 Lego pieces (be)                          | (use) by Theo to  | build a robot.                           |
| (12)  |   |  |
| a. David shot the arrow at the target ha        | anging on the peach tree in the backyard.                   |  |
| b. An arrow (be) (sh backyard.                  | noot) by David at   | t a target hanging on a pear tree in the |

This exercise will prepare students for the word problems that can be completed in the math class led by the content teacher, while ESL professional will make sure that students are well prepared for the math jargon and the formal properties of the passive voice as shown in the above discussion. The division of labor for teaching academic language between ESL and content teachers is possible and would work fine for content teachers to not get overwhelmed with the grammatical details of the passive construction, while the math teacher can focus on the new vocabulary and the numerical side of fractions' knowledge instead. The above practice is very instrumental for figuring out the role of the AUX and the main verb formation in passive constructions. In my own observation of teaching ESL courses at the college level, many international students in English Composition courses were confused about the passive forms and especially the AUX be tense used in these constructions. The focused instruction of language form, function, and structure will ensure that the formal structure of passive is learned in various content subjects, and the state's standards for the mastery of content and language objectives at a certain level are met by ELLs.

The section showed how focus on function, form, and structure of various constructions will enhance the more expedited uptake of various constructions with greater accuracy and fluency when ELLs become more familiar with these constructions after their multiple encounters in various subjects.

#### 3. Conclusions

In conclusion, the paper utilized the SIOP (EVS, 2014) and Connectionist (BRD, 2014) Models to enhance the focus on language form, function, and structure through Social Studies and Math lessons. With the assumption of sheltered instruction utilized during the teaching of content subjects, the paper showed how the language objectives of the SIOP-

modeled lessons should include the focused instruction of language form, function, and structure. The main proposal advocated that in addition to a content teacher the ESL professional should also be present in the schools tasked with the teaching of specific language objectives and fully carry out the state ELP standards applicable to a particular grade level. In an ideal scenario, the ESL professional should teach not just ELLs but their native speaker peers because the skills of linguistic analysis discussed in this paper are very much applicable to mainstream students regardless their future professional goals as the exercises and assessment materials shown in this paper are also instrumental to develop analytical skills that will be useful for acquiring a new vocabulary and academic literacy in English. It is also assumed that ESL professionals will collaborate with content area colleagues in planning their language foci by learning ahead of instructional time what the most challenging content texts will be covered in a given semester and plan their instruction accordingly. The paper will be useful not just for ESL professionals but Language Arts and content teachers for planning and executing their lesson plans through the enhanced sheltered instruction of content area subjects since student success in content areas heavily depends on the fluency in academic language. Lastly, it is also of high importance to develop the instructional guides and manuals that will include a variety of language objectives that inservice teachers will utilize in their lesson plans to better serve ELLs in their classes. The currently published Sheltered Instruction manuals are a big step forward, but pre- and in-service teachers are still in great need of clearly written academic language development textbooks that can be used across disciplines and will make the learning of academic language conventions easier and accessible to ELLs with a variety of language background. This can be a direction towards the future well-being of schools and students alike.

#### References

- Andrews, S. (2006). Teacher Language Awareness. Cambridge, UK: Cambridge University Press.
- Bautista, N., & Castañeda, M. (2011). Teaching Science to ELLs, Part1: Key strategies every teacher should know. *Science Teacher*, 78(3), 35-39.
- Bigelow, M., & Ranney, S. (2005). Pre-service ESL teachers' knowledge about language and its transfer to lesson planning. In N. Bartels (Ed.), *Applied linguistics and language teacher education*, vol.4 (pp. 2179-200). New York: Springer Science/Business Media. https://doi.org/10.1007/1-4020-2954-3 11
- Bigelow, M., Ranney, S., & Dahlmann, A. (2006). Keeping the language focus in content-based ESL instruction through proactive curriculum planning. *TESL Canada Journal*, 24(1), 40-58. https://doi.org/10.18806/tesl.v24i1.27
- Bullock, R., Brody, M., & Weinberg, F. (2014). *Little Seagull Handbook* (2nd ed.). NY, London: WW Norton & Company.
- Bunch, B. (2013). Pedagogical language knowledge: Preparing mainstream teachers for English learners in the new standards era. *Review of Educational Research*, *37*(February), 298-341. https://doi.org/10.3102/0091732X12461772
- Carrasquillo, A., & Rodriguez, V. (2002). *Language minority students in mainstream classroom*. Clevedon, the UK: Multilingual Matters. https://doi.org/10.21832/9781853595660
- Celce-Murcia, M., & Larsen-Freeman, D. (1999). *The grammar book: An ESL/EFL teacher's course* (2nd ed.). Boston, MA: Heinle & Heinle.
- Chamot, A., Barnhardt, S., El-Dinary, P., & Robbins, J. (1999). *The learning strategies handbook*. White Plains, NY: Longman.
- Chamot, A. U., & O'Malley, J. M. (1994). *The CALL handbook: Implementing the cognitive academic language learning approach*. New York: Addison-Wesley.
- Contemporary Linguistics. (2010). Sixth edition. (Eds.) O'Grady et al. Boston, New York: Bedford/St. Martin's.
- Coughlin, C., & Trembley, A. (2014). Morphological decomposition in native and non-native French speakers. *Bilingualism: Language & Cognition*, 18(3), 524-542. https://doi.org/10.1017/S1366728914000200
- Diaz-Rico, L. (2014). *The cross-cultural, language and academic development handbook: A complete K-12 Reference guide* (5th ed.). Boston, New York: Pearson.
- Dugard, Martin. (2004). Into Africa: Epic adventures of Stanley and Livingstone. New York: Broadway Books.

- Dunn, T. G., & Shriner, C. (1999). Deliberate practice in teaching: What teachers do for self-improvement. *Teaching and Teacher Education*, 15, 631-651. https://doi.org/10.1016/S0742-051X(98)00068-7
- Echevarria, J., & Vogt, M. (2010). Using the SIOP Model to improve literacy for English learners. *NERA Journal*, 46(1), 8-15.
- Echevarria, J., Richards-Tutor, C., Canges, R., & Francis, D. (2011). Using the SIOP Model to promote the acquisition of language and science concepts with English learners. *Bilingual Research Journal*, *34*, 334-351. https://doi.org/10.1080/15235882.2011.623600
- Echevarria, J., Vogt, M., & Short, D.J. (2017). *Making content comprehensible for language learners: The SIOP model* (5th ed.). New York, NY: Pearson.
- Freeman, D., & Freeman, Y. S. (2014). Essential Linguistics: What teachers need to know to teach ESL, reading, spelling, grammar. Portsmouth, NH: Heinemann.
- Himmel, J., Short, D., Richards, C., & Echevarria, J. (2009). Using the SIOP Model to improve middle school science instruction. *CREATEBrief*, 1-4.
- Inceli, Ö. (2015). The perceptions of English teachers to the SIOP Model and its impact on limited English proficiency. *Journal of Ethnic and Cultural Studies*, *2*(1), 15-28. https://doi.org/10.29333/ejecs/13
- Instructional guidelines and resources for ELLs: Based on Ohio's ELP standards. (2015). Ohio Department of Education. Center for Curriculum and Assessment.
- Kareva, V., & Echevarria, J. (2013). Using the SIOP Model for effective content teaching with second and foreign language learners. *Journal of Education and Training Studies*, 1(2), 239-248. https://doi.org/10.11114/jets.v1i2.173
- Klingner, J. K., Boardman, A. G., Eppolito, A. M., & Schonewise, E. A. (2012). Supporting Adolescent English Language learners' reading in the content areas. *Learning Disabilities: A Contemporary Journal*, 10(1), 35-64.
- Krashen, S. (2003). Explorations in language acquisition and use. Portsmouth, NH: Heinemann.
- Larsen-Freeman, D. (2001). Teaching Grammar. In Celce-Murcia (Ed.), *Teaching English as a Second/Foreign Language*, (3rd ed., pp.256-270). Boston, MA: Heinle & Heinle.
- Lyster, R. (2007). Learning and teaching languages through content: A counterbalanced approach. Amsterdam, Philadelphia: John Benjamins. https://doi.org/10.1075/lllt.18
- Norris, J., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. Language Learning, 50, 417-528. https://doi.org/10.1111/0023-8333.00136
- Oxford, R. (1990). Language learning strategies: What every teacher should know. Boston, MA: Heinle & Heinle.
- Richards, J., & Rogers, T. (2001). *Approaches and Methods in Language Teaching, Second Edition*. Cambridge, UK: Cambridge University Press. https://doi.org/10.1017/CBO9780511667305
- Rosenburg, M. Fractions. Grade 5 textbook. Teacher Created Resources Series, Inc. Published: Mary D. Smith. Westminster, CA.
- Schmidt, R. W. (2001). Attention. In Robinson, P. (Ed.), *Cognition and second language instruction*, (pp. 3-32). Cambridge, UK: Cambridge University Press. https://doi.org/10.1017/CBO9781139524780.003
- TESOL International Association. (2017). Draft 2017 TESOL Standards for P-12 teacher Education Programs. Retrieved from https://www.tesol.org/docs/default-source/advocacy/tesol\_standards-p12-teacheredprograms-public-draft.pdf?sfvrsn=0
- Ur, P., & Wright, A. (1989). Five-minute activities: A resource book of short activities. Cambridge: CUP.
- Weaver, C. Grammar to enrich and enhance writing. Portsmouth, NH: Heinemann.
- Webster's new world dictionary. (1989). Compact School & Office Edition. (Eds.), Neufeldt, V., & A. Sparks. New York: Prentice Hall.
- Zimmerman, Ch. (2014). Teaching and learning vocabulary for second language learners. In Celce-Murcia et al. (Eds.), *Teaching English a s a second/foreign language*, 4th edition (pp.288-304). Boston, MA: Heinle & Heinle.

#### **Notes**

- Note 1. These principles are discussed below, in Section 1.2.
- Note 2. Note that teachers should be aware of general pedagogical theory which states that language structures taught in one lesson should not be expected to appear in student production in next lesson. It takes extended time and practice before these structures are incorporated in the output with enough fluency and confidence (Weaver, 2008; Freeman & Freeman, 2014 among others).
- Note 3. The excerpt is taken from Martin Dugard's novel only for illustrative purposes and there is no Social Studies or any other text to our knowledge that contains this information except the primary source itself. We don't intend to incorporate this text in any future text either.
- Note 4. Although it is evident that 'scathing' must be a complex word consisting of two morphemes at least to have referential meaning, 'scathe—' can be considered as a bound root that exist in many languages as a dominant type of lexical morpheme while in English most of the roots are free morphemes.

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