An Investigation into the Phenomena of Meaning Making and Wording in Non-Fiction Novel from Systemic Functional Linguistics

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https://orcid.org/0009-0003-2085-1275
https://doi.org/10.54855/paic.2347

ABSTRACT

In the light of Systemic Functional Linguistics, language is both a source of meaning-making and a source of wording modes in texts. To further clarify this ideology in practice, the article uses the phenomenon of wording in the non-fiction novel "Silent Spring" by Carson - the world's most famous female writer for her environmental protection works- for analysis aiming at teaching grammatical metaphor to the students of English at a University. The article briefly introduces the theory of Systemic Functional Linguistics, including the Grammatical metaphor (GM). Next, descriptive, qualitative, quantitative, and quasi-experimental methods are used with more than 200 samples selected to determine the relationship between the lexicogrammatical and semantic aspects in the impact of the context; the article pays special attention to congruent expressions and metaphorical expressions. Based on applying the quasi-experimental method to English classes of 373 students, the writers describe the three stages of teaching (GM), analyze the data related, and present research results. The conclusion consists of application suggestions in terms of language research and language education, such as reading, understanding, evaluating, and building relevant types of text.

Keywords: Grammatical metaphor, meaning-making resource, wording, application

Introduction

Background of the study

In the 1960s, Systemic Functional Linguistics (SFL) appeared as a new trend initiated by Halliday. SFL takes semantics as its foundation, and its expressions are through three types of clauses: Clause as representation including ideational meaning, clause as an exchange with interpersonal meaning, and clause as a message with textual meaning. This article focuses on the resource for making ideational meaning through congruent expressions, especially metaphorical ones. According to Halliday (1994, p.341), when some aspect of the structural configuration of a proposition, whether in its ideational or interpersonal function or both, is in some way encoded, the easiest to understand of the selected meanings, grammatical metaphor appears. Grammatical metaphors (GM) are a series of linguistic operations that involve
transformations in the expression of meaning and are a resource for creating meaning (Halliday, 2014). However, mastering GM theoretically and then applying this new aspect to English teaching and studying are still limited in the context of Vietnam. Most students were not confident about their presentation skills because of making mistakes in vocabulary usage, grammar, and fluency when giving presentations (Pham et al., 2022) or the grammatical errors made by IELTS test participants (Xiangmin, 2022). These are the reasons why GM should be introduced and applied widely in English education. To introduce the way of applying GM in English teaching and learning, based on multiple methods, including quasi-experimental, with 200 samples collected from the book “Silent Spring” by Carson as a model in transforming congruent expressions into metaphorical ones and otherwise, this paper hopes to be a part of the contribution to applying GM in improving English skills, especially writing skill.

**Aims of the study**

The article aims to apply grammatical metaphors to increase English students’ ability to interpret and create English text.

**Scope of the study**

The scope of the article's research is the context of teaching GM to English students at a university and the application of the quasi-experimental method to find out the results. This paper solves the issues relating to ideational grammatical metaphor, not interpersonal grammatical metaphor. However, the paper explains interpersonal grammatical metaphor as a theoretical part.

**Research Questions**

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

**Question 1**: How is the application of grammatical metaphor carried out through teaching English to students at the University of Foreign Language Studies- Da Nang University?

**Question 2**: How are the modes of congruent and metaphorical expression applied to English teaching in improving students’ interpreting and creating skills?

**Literature review, theoretical background, and the work "Silent Spring."**

**Literature review**

Historically, Systemic Functional Linguistics (SFL) is rooted in anthropology by Malinowski (1935), and its earliest formulation as a linguistic theory dates back to Firth (1957). SFL was originally proposed by Halliday (1961). In "An Introduction to Functional Grammar," one of the newest movements of language, Halliday (1985) gives a lot of new concepts, among which GM is one of the most concerning in Systemic Functional Linguistics. GM has been dramatically developed by Halliday through his series of research (1985, 1994, 1999, 2004, 2014) and by other SFL linguists like Martin (1992), Matthiessen (1999), Geoff Thompson (1996, 2004), Devrim (2015), David Banks (2019), Bloor, Eggins…In Vietnam, GM was first introduced by Hoang Van Van (2005) through his Vietnamese version of Halliday’s book.

**A sketch of Grammatical Metaphor**

According to Halliday (1985), language is a resource organized into three strata that are related using realization. The first stratum is *semantics*, or the system of meaning realized by lexicogrammar, namely the system of wording, including grammatical structures and lexical items. The second one is *lexicogrammar*, which is realized by the third system: *phonology*, namely the system of sounding. The phenomenon has *three semantic components*, which are correspondingly expressed by three linguistic units in lexicogrammar. A *phenomenon* is considered the most general experiential category. It is anything that can be construed as part of human experience. It is a phenomenon that is the environment from which meanings are created in the process of construing human experience through language. Functional grammar shows three levels of complexity in the phenomena: the first is elementary or a single *element*, the second is a configuration of elements called a *figure*, and the third is a complex of figures called a *sequence*.

![Diagram of Grammatical Metaphor](image)

**Figure 1.** Typical realization of sequences, figures, and elements (Halliday 1999, p.55)

The way of wording by Luther King below can be used for illustration of the semantic functions of elements, figures, and sequences:

<table>
<thead>
<tr>
<th></th>
<th>One hundred years later</th>
<th>the Negro is still languishing in the corner of American society.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elements</td>
<td><em>Circumstance</em></td>
<td><em>Participant</em></td>
</tr>
<tr>
<td>FIGURE 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>and finds himself an exile in his own land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elements</td>
<td><em>Relator</em></td>
</tr>
<tr>
<td>FIGURE 2</td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE (type: extension):** Figure1 + Figure2 by *relator and*

**Figure 2.** Semantic functions of element, figure, and sequence
Halliday (1985) discusses several grammatical phenomena and regards these as "metaphorical modes of expression". Grammatical metaphor (GM) is "the phenomenon whereby a set of agnate forms is present in the language having different mappings between the semantic and the grammatical categories" (Halliday & Matthiessen, 1999, p.7). GM is a substitution from one grammatical class to another, resulting from the transition from congruent to metaphorical expressions (Halliday, 1985). Halliday (1985,1994) explains that congruent expressions are natural expressions that language encodes to express meaning; for example: "action" is performed by "verb," while "person," "place," and "thing" are carried by "noun." However, in metaphorical expressions, "noun" is used to refer to "process" or "adjective" is called an “epithet” (Banks, 2003), for example, the metaphorical expression "Her cleverness..." instead of the congruent form "She is clever.". In this case, the relative process "is" is omitted. Cullip (2000) emphasizes GM as an effective tool for creating text and often appears in written discourse, allowing writers to express many valuable meanings. According to Halliday (1985), there are two types of GMs: metaphors of transitivity and metaphors of mood (including modality). In terms of semantics functions, these are, respectively, ideational grammatical metaphors and interpersonal grammatical metaphors.

**Ideational grammatical metaphor**

Halliday (1994, p.343) claims that ideational grammatical metaphor (IGM) is a metaphor of transitivity. It means that this term is used to refer to the transference from congruent to metaphorical mode in grammar. IGM's function is concerned with the relationship between the external world and the internal world of our experience of the world. It reflects the speaker's experience of the inner and outer worlds through language use. It is the content function of language through which language encodes the cultural experience and the individual's experience as a member of the culture (Halliday, 1978, p.112). In IGM, a metaphorical shift occurs between two or more classes: participant (entity), process, and Circumstance. In IGM, the feature of the process may coincide with the feature of an entity (verb and noun). This is the case in IGM of transitivity, as shown in Figure 3 below:

(1) a. Metaphorical expression: *Installation of cylinder...*
(1) b. Congruent expression: *How to install the cylinder.*

<table>
<thead>
<tr>
<th>Semantic category</th>
<th>Process (action, event)</th>
<th>Entity (person, Thing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Install’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammatical class</td>
<td>verb</td>
<td>noun (grammatical choices)</td>
</tr>
<tr>
<td></td>
<td>Install</td>
<td>installation (two realization options)</td>
</tr>
</tbody>
</table>

**Figure 3. Grammatical metaphor (ideational grammatical metaphor)**

It will be recognized that both (1a) and (1b) above are based on nominalization: the meaning of
"How to install the cylinder" is reencoded as "Installation of cylinder...". In this figure, a process is remapping from the verb to the noun "to install" into a nominal form, "installation," so an ideational grammatical metaphor occurs. In grammatical metaphor, ideational grammatical metaphor plays an essential part in generating various expressions from the given meaning, enriching the representation of the clause in SFL. The main shift of elements falls into Thing as a nominal group. The Thing or nominal group is derived from the nominalization of verbs, adjectives, relators, Circumstances, etc. Halliday (1994) claims that nominalization is the single most powerful resource for creating grammatical metaphors.

**Interpersonal grammatical metaphor**

Interpersonal grammatical metaphor is concerned with the relationship between the speaker and the hearer. It represents the component through which the speaker intrudes himself into the context of the situation, "both expressing his attitudes and judgments and looking to influence the attitudes and behavior of others" (Halliday, 1978, p.112). This function is concerned mainly with clauses as exchanges. Interpersonal grammatical metaphor involves metaphor of modality and metaphor of mood. The metaphor of modality is more likely to be found in written language, for instance, the clause:

(2) a. Metaphorical expression: *We know that pesticides contained in runoff from farms and forests are now being carried to the sea in the waters of many and perhaps all of the major rivers.*

(2) b. Congruent expression: *Pesticides contained in runoff from farms and forests are now being carried to the sea in the waters of many and perhaps all of the major rivers.*

In this case, (a) is expressed in the interpersonal grammatical metaphor of modality through the projection clause, while the (b) expression is seen as an alternative non-metaphorical construction. The metaphor of mood construes a discourse semantic speech function through an incongruent mood option in grammar, for example:

(3) a. Metaphorical expression: *Could you give me your notebook, please?*

(3) b. Congruent expression: *Please give me your notebook.*

In example (b), the default encoding of a command is an imperative. A command which is expressed by extra encoding tools such as the interrogative form, the explicit expression of the addressee “you”, and the modal verb “could” in (a) is a metaphorical variant of the default imperative.

**Introducing the author and her work "Silent Spring"**

The book “Silent Spring” was officially introduced in 1962 by zoologist, marine biologist, and environmental protection advocate Rachel Carson (1907-1964). The book is considered a classic work that started environmental protection movements around the world. It is a wake-up call about the environment and contributes to "changing the flow of human history" (Gruening). The book emphasizes the harmful effects of pesticides on the environment and proposes policies.

In terms of content, this is an ideological work, one of the best on the most topical
environmental issues, and highly educational for all fields, not just language education.

In terms of linguistic expression, from commonly occurring transitivity systems to arguments and scientific evidence in the passage, the author naturally uses both congruent and metaphorical expressions.

Methods

The article is based on multiple methods, including qualitative, quantitative, and quasi-experimental methods. Observation and interviews are also used to collect the information.

Settings:

One of the paper writers is a lecturer in linguistics who has taught Functional Grammar by Halliday to English students at the University. In this trend of applicable linguistics, GM is considered “an effective tool”, if well-applied, to improve students’ writing skills. He also has taught Stylistics in which many stylistic devices like lexical metaphor, conceptual metaphor, and repetition…, are introduced, except GM. In this context, he introduces GM as "a potential stylistic device" to increase students' writing skills.

Participants: The 3rd year students at the University of Foreign Language Studies- Danang University. The two tables below show the necessary information.

Table 1. Number of students’ Functional Grammar classes

<table>
<thead>
<tr>
<th>Subject</th>
<th>Class</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Introduction to Functional Grammar</td>
<td>Functional Grammar 1</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Functional Grammar 2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Functional Grammar 3</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Functional Grammar 4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Functional Grammar 5</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Functional Grammar 6</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Functional Grammar 7</td>
<td>30</td>
</tr>
</tbody>
</table>

Table 2. Number of students’ Stylistics classes

<table>
<thead>
<tr>
<th>Subject</th>
<th>Class</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Introduction to Stylistics</td>
<td>Stylistics 1</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Stylistics 2</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Stylistics 3</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Stylistics 4</td>
<td>71</td>
</tr>
</tbody>
</table>

Materials: An Introduction to Functional Grammar (Halliday, 2014a), Construing Experience Through Meaning (Halliday & Matthiessen, 1999), and 200 samples of congruent and metaphorical expressions collected from “Silent Spring” by Carson.

The research consists of three stages: Pre-teaching GM, While-teaching GM, and Post-teaching GM. They are not the same as a teaching plan; these macro designs reflect a strategic plan to apply GM into a university teaching program. It means that all the activities in these three stages are not teaching plans but are designed as a strategic plan for applying GM in English teaching.
Pre-teaching grammatical metaphor stage

The main purpose of this stage is to prepare the student's perception of GM learning; its activities are:

- Informing students of their learning program including GM.
- Providing them with materials involved in GM; for these materials, the students are guided to pay attention to the terms involved in GM, such as congruent expressions, incongruent/metaphorical expressions, nominalization, packing information, and unpacking information.
- Providing them with the book “Silent Spring” by Carson as a model text relating to “environment protection” in the aspect of content and to natural writing that persuades readers in the aspect of effective writing.
- Ask students to focus on how the author writes in argumentative and descriptive paragraphs (of the book).
- Providing students with a brief questionnaire and collecting the information:
  1. Have you ever read or learned about GM?
  2. Do you think that you know and use GM in academic writing?
  3. Do you want to apply for GM to improve your English skills?

The results of this stage will be explained and discussed later.

While – teaching GM stage

The main purpose of this stage is to provide the students with basic knowledge of GM and the application of GM to improve their writing.

- Teaching SFL the most.
- Helping students recognize the significance of GM.
- Teaching GM through textbooks, texts, and doing exercises (using samples from “Silent Spring”).
- Helping students identify congruent expressions and metaphorical expressions and transform them.
- Asking students to prepare and present some topics of GM.

The results of this stage will be explained and discussed later.

Post-teaching GM stage

The main purpose of this stage is to evaluate the results of the three stages through the students’ demonstration of their knowledge and performance of GM.

- Building the criteria for evaluating the student’s ability to identify congruent and metaphorical expressions.
- Having the students do exercises in identifying and transforming congruent and metaphorical expressions.

The results of this stage will be explained and discussed later.
Findings and discussion

Pre-teaching grammatical metaphor stage

After quickly asking students about using GM in academic writing as well as applying linguistic theories to improve writing skills, the initial research obtained the following results:

Table 3. The percentage of students in recognition and application of GM

<table>
<thead>
<tr>
<th>Questions</th>
<th>Functional Grammar classes</th>
<th>Stylistics classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of students</td>
<td>Percentage</td>
</tr>
<tr>
<td>Have you ever read or learned about GM?</td>
<td>33 /196</td>
<td>16,8%</td>
</tr>
<tr>
<td>Do you think that you know and use GM in academic writing?</td>
<td>17/196</td>
<td>8,7%</td>
</tr>
<tr>
<td>Do you want to apply for GM to improve your English skills?</td>
<td>13/196</td>
<td>6,6%</td>
</tr>
</tbody>
</table>

From the information in Table 3, the research team continued to get more specific information through the system of exercises. The results are as follows:

Table 4. The percentage of students doing the system of exercises

<table>
<thead>
<tr>
<th>The contents of the system of exercises</th>
<th>Functional Grammar classes</th>
<th>Stylistics classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of students</td>
<td>Percentage</td>
</tr>
<tr>
<td>Identifying the congruent expressions in the text</td>
<td>102/196</td>
<td>52%</td>
</tr>
<tr>
<td>Identifying the metaphorical expressions</td>
<td>15/196</td>
<td>7,6%</td>
</tr>
<tr>
<td>Transforming congruent to metaphorical expressions</td>
<td>13/196</td>
<td>6,3%</td>
</tr>
<tr>
<td>Transforming metaphorical to congruent expressions</td>
<td>18/196</td>
<td>9,1%</td>
</tr>
</tbody>
</table>

The results in this stage show that a large number of students couldn’t identify and transform congruent and metaphorical expressions. This also leads to the suggestion that teaching SFL, specifically GM, is extremely urgent and necessary for improving students' interpreting and writing skills.

Explaining the basic contents of SFL for students:

These key terms should be introduced: Element, figure, sequence (semantics), clause complex, clause, phrase/ group, process, participant, Circumstance, grammatical metaphor, congruent expression, metaphorical expression, transformation, nominalization, unpacking, packing, and downgrading. The 4 elements of the transitivity system of construing experience in the
following plate are the leading ones used to express in both congruent and metaphorical modes as well as in transformation.

Figure 4. Types of elements (Halliday, 1999, p.59)

Distinguishing congruent expressions from grammatical expressions

While-teaching grammatical metaphor stage

The steps making students understand and identify patterns of transitivity

Step 1. Reading and thoroughly understanding the source text

Before reading the text, readers need to pay attention to the following information as Halliday (1985) suggested:

1. What's this about?
2. What are the Processes?
3. Who/what is involved? Participants
4. What are the relations between these Participants?
5. What are the circumstances around this?
6. Which ideas are most important?
7. How is the author saying this?
8. What impression do you have?

These guiding questions help students understand not only the key elements construing experience, such as process, participant, Circumstance, and relator in congruent and metaphorical expressions but also the content of the text. In addition, the terms "unpacking," "packing," "downgrading," and "nominalization" help identify the meaning of the text and have different choices for expression modes and transformation.

To better understand the function of GM, the article identifies specific changes in both vocabulary and grammar that are carried out during the “unpacking” process and the “packaging” process of information, for example:
(4) a. Congruent expression: Food loss is defined as the edible food that is lost throughout production, postharvest, and processing, whereas food waste refers to edible food lost at the end of the food chain due to the behavior of retailers and consumers. (Nance et al., 2016)

**Step 2. Identifying expressions in congruent forms**

In this step, students need to explain the meaning of the original expressions as clearly as possible to understand them thoroughly. The process of converting from the original expression with GM to the transformed expression.

(4) b. Congruent expression: Food loss is the food we can eat but that we discard while it is being produced, after it is harvested, or while it is being processed. Food waste is food we can eat but throw away at the end of the food chain because retailers and consumers choose not to sell or eat it.

The phrase “edible food” is decompressed into “Food we can eat…”

The nominalization cluster “production, postharvest and processing” is transformed into the processes “is being produced, is harvested...being processed”.

The word group “due to” functions as a cause-and-effect relation; this leads to using “because” in the ‘unpacked’ clause.

Native English speakers recognize these conversion patterns as normal expressions in communication;

**Step 3. Performing transitivity**

In the last step, all the information is “packaged” into a metaphorical expression with the following elements:

(4) c. Metaphorical expression: Food that is edible but discarded during production is known as food loss, whereas food discarded once it has reached the market is called food waste.

Which “Food we can eat,” "we discard," and "while it is being produced" can become adjectives like "edible" and "discarded" and reduce the suffix "during production."

It should be noted that each congruent or metaphorical expression has its value. The best method of expression is the one chosen most appropriately in the communication situation. For example, Luther King's (1963) clause complex (congruent expression) can be transformed into many metaphorical expressions, but to reveal the problem to be resolved, combined with tone and emotions, Luther King chose a congruent expression:

(5) Congruent expression: This note was a promise that all men-black men, as well as white men, would be guaranteed the unalienable rights of life, liberty, and the pursuit of happiness.

Conversely, in a text that needs to condense and compress information, metaphorical expressions can be chosen as Halliday and Matthiessen (2014) show:

(6) a. Congruent expression: Tons and tons of rocks pressed down on it. (a clause)

(6) b. Metaphorical expression: The pressure down on it by tons and tons of rocks...(only one-word phrase)
Steps for transforming

In an incongruent expression, the process is nominalized to have the function of entity (Thing). In some cases where nominalization is not possible, appropriate words, word groups, or structures are used for conversion; this situation is called denominated.

Figure 5. Clauses and transformation through nominalization and non-nominalization (Adapted from Halliday, 2014)

Figure 5 shows that "of an extra packer" and "in technology" transform into sub-clauses or prepositional phrases in the post-complementary situation of "allocation" and "advances." "getting better" is converted into "advances" through non-nominalization.

The structure of classifying elements includes Classifier + Thing; for example: "Alcohol impairment" (Halliday, 2014) is a noun that functions as a thing, has the status of an entity, and can participate in a discourse, some process to expand the meaning without losing semantic characteristics.

The characteristic of nominalization is to make information denser. This means that a multiple-sense clause can be "packaged" into a noun (described as "stable") rather than into a verb (described as "transient"), thereby opening up a process of nominalization with many expressive possibilities. Harder (2010) believes that the function of any element in language can be observed from two perspectives: (1) the element itself must complete the task; (2) its role is expressed in the larger structure.

Based on the above viewpoints, the article develops basic conversion operations including:

Transforming “relator” into an entity

(7) a. Congruent expression: *He was late because it rained.*

(7) b. Metaphorical expression: *The cause of his being late was the rain.*

In example (a) the connecting element/ or relator “because” is transformed into the entity “the cause” in the metaphorical expression in (b).

Transforming “process” into an entity
(8) b. Metaphorical expression: The transformation of water into ice...
In example (a) “transforms” is a process and is nominalized as “transformation” in (b). In other words, “transforms” are transformed into entities.

Transforming “epithet” into an entity
(9) a. Congruent expression: The price is unstable.
(9) b. Metaphorical expression: Instability of price...
As we can see, a clause with a qualitative function can still be transformed into a qualitative entity.

Transforming “circumstance” to entity
(10) a. Congruent expression: We went to Nha Trang last year.
(10) b. Metaphorical expression: Nha Trang was our destination last year.
Example (a) shows that “to Nha Trang” is a scene combined with the process “went” to transform into the entity “our destination” in (b).

The transfer modes in expressing ideational meaning

The mode of expressing ideational meaning via transferring from congruent expression to metaphorical expression
In expressing ideational meaning, from congruent to metaphorical expression, nominalization plays a key role. To convert a congruent expression to a metaphorical one, the following two conditions must be met:

Condition 1. There must be nominalization or non-nominalization
(11) a. Congruent expression: Mary saw something wonderful.
(11) b. Metaphorical expression: A wonderful sight met Mary's eyes. (Halliday & Matthiessen, 2014)
In nominalizing, the process "see" is a mental process that must be changed to "sight," and at the same time, "something wonderful" continues to transform into the full nominal phrase "a wonderful sight" and so on.

Condition 2. There needs to be a new process
For example, “met” in (11b) is a material process that expands the meaning. Some processes allow expansion using nominalization; for example: "A wonderful sight" in (11c) has a different function in a clause: "Mary came upon a wonderful sight," and the process "came upon" is close in meaning to "saw" and "met."

Ideational grammatical metaphors have the following main trends: (1) downgrading from clause complex to clause, (2) downgrading from clause to nominal phrase, and even (3)
downgrading from nominal phrase to word. Therefore, first of all, it is necessary to identify how many clauses are in the congruent expression, the potential nominalization in which parts of the clauses, and the potential connection of the key meaning in the clauses. Next, deciding on the selection of conversion factors according to the nominalization expressions and carrying out the transformation is necessary. Finally, there are the testing steps.

This is an explanation for students from congruent expressions to metaphorical expressions:

(12) a. Congruent expression: *Olga Owens Huckins told me of a small world made lifeless that she experienced bitterly, so I attended sharply back to a problem I had long been concerned about.*

Explanation: In structure, the expression (12) is realized by the two complex clauses that are connected by relator ‘and’ another element showing the cause-effect relation ‘so’. Nominalization can help downgrade each complex clause to one clause in the following ways:

The structure "a small world made lifeless that she experienced bitterly" can be transformed: "her own bitter experience of a small world made lifeless." In transforming, process "experienced" is nominalized "experience," circumstance "bitterly" is transferred into "bitter," modifying a "new" noun in the noun group “bitter experience” and “she”- a main participant as the subject becomes "her" in "her bitter experience."

The structure “I attended sharply” can be nominalized as “my sharp attention”. This transformation makes the process “attended” become a noun as participant "attendance"; in this case, circumstance "sharply" is transferred into "sharp" as a modifier in "sharp attendance"; participant "I" is changed into "my" in "my sharp attendance."

The structure "a problem with which I had long been concerned" can also be transferred into "a problem of my long concern". Nominalization still happens in this case: Process "concerned" becomes "concern," and this leads the change of the role of "long" as Circumstance to a modifier for nominal group "long concern" and "I" as Participant to Possessive element "my" in "my long concern."

*The process of systematic transformation above leads to the result:*

(12) b. Metaphorical expression: *Olga Owens Huckins told me of her own bitter experience of a small world made lifeless, and her words made my sharp attendance back to a problem of my long concern.*

In terms of component structure, from congruent expressions to metaphorical expressions, the process of nominalization appears throughout and follows the specific expression of each type. This transformation is highly systematic because a nominalized procedural or qualitative element always entails a change in the function and grammatical role of the related elements.

The study offers several symbolic exercises to guide learners in conversion practice as follows; it should be noted that this conversion is for the application of methods, while the effectiveness and adaptability of each conversion result depends on the circumstances of use in each specific context.
The modes of expressing ideational meaning, from metaphorical expression to congruent expression

As mentioned, nominalization often plays a decisive role in combining with other elements to create and transform many different expressions without changing the original basic meaning. The following table shows the order of performing congruent expressions and metaphorical expressions. This sequence first advances one or both clauses.

In expansion structures, two or more clauses are often used to express compatibility. For example, in the congruent expression clause + clause, the two clauses are connected by the conjunction "because," indicating the cause: "He resigned because they had departed." For metaphorical expression, the following steps are required: Semantically, the "cause-effect" relationship is still maintained, but formally, it is necessary to nominalize at least one clause; one of the two clauses needs to be reduced to an element or elements of the remaining clause. The clause of cause is changed into a prepositional phrase of cause, and thus first nominalize the verb as follows: From a clause "They had departed" change to the nominal phrase "their departure" and combine with "because of" turns into a prepositional phrase with a contextual function indicating the cause "because of their departure". As a result, GM appears to replace the congruent expression: "He resigned because of their departure."

GM opens up many possibilities for choosing different expressions. Both clauses are “reduced” to elements, thereby forming a new clause with a new process indicating cause and effect. In this case, the verb “cause” is used to connect the two previous clauses that have been nominalized “Their departure caused his resignation”; the verb “proved” or the verb “reviewed” is also used as in: “Their departure proves the correctness of his resignation”.

Meaning in a situation can be expressed in many different ways, congruent or metaphorical expressions. Whether each type of expression is good or not doesn't depend on congruent or metaphorical expression but on the context of the text itself. Therefore, the metaphorical expression of experience - an expression that has "packed" information, can be "unpacked" to become a congruent expression when the context allows for effectiveness, for example:

(13) a. Metaphorical expression: Indeed, its existence is so ephemeral that medical researchers are unable, without special procedures, to sample it before the body has destroyed it.

(13) b. Congruent expression: Indeed, it exists so ephemerally that if there are no special procedures, medical researchers are unable to sample it before the body has destroyed it.

The modes of expressing ideational meaning from metaphorical expression to metaphorical expression

Halliday (1985) asserted that language is a resource for creating meaning and meaning is chosen depending on the context. Depending on each specific context, there may be many different options, for example:

(14) a. Metaphorical expression: A reduction of diarrheal disease achieved in Georgia through fly control was wiped out within about a year.

(14) b. Metaphorical expression: A diarrheal disease reduction achieved in Georgia through fly control was wiped out within about a year.
c. Metaphorical expression: *Georgia’s achievement in the reduction of diarrheal disease due to fly control was wiped out within about a year.*

**Post–teaching grammatical metaphor stage**

The contents of the two stages above reflect a part of the research in a quasi-experimental method. The research has described procedures for expressing ideational meaning through GM. From there, the research team processed the information directly from 196 students in Functional Grammar classes and 177 students in Stylistics classes through the system of guided exercises; the research obtained the following results:

**Table 5. The results of applying GM**

<table>
<thead>
<tr>
<th>Criteria for evaluation through the system of guided exercises</th>
<th>Functional Grammar classes</th>
<th>Stylistics classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of students</td>
<td>Percentage</td>
</tr>
<tr>
<td>Identifying the congruent expressions</td>
<td>168/191</td>
<td>88%</td>
</tr>
<tr>
<td>Identifying the metaphorical expressions in the text</td>
<td>110/191</td>
<td>58%</td>
</tr>
<tr>
<td>Transforming metaphorical to congruent expressions</td>
<td>135/191</td>
<td>71%</td>
</tr>
<tr>
<td>Transforming congruent to metaphorical expressions</td>
<td>80/191</td>
<td>42%</td>
</tr>
</tbody>
</table>

**Figure 6.** A comparison between results in pre-teaching GM stage and post–teaching GM stage of Functional Grammar classes
Figure 7. A comparison between results in pre-teaching GM stage and post-teaching GM stage of Stylistics classes

The three stages of carrying out the quasi-experiential methods of the research show that the while-teaching GM stage is a decisive one that creates the distance of students’ knowledge and application in GM between the pre-teaching GM stage and the post-teaching GM stage. In other words, the more effective the while-teaching GM stage is, the more necessary to apply GM to the teaching program for enhancing English students’ interpreting and creating skills.

Conclusion

Based on the theory of grammatical metaphor in Systemic Functional Linguistics (Halliday, 1985), the article identifies and collects 200 samples of congruent and metaphorical expressions in Silent Spring by Carson. Through description and analysis of these samples, the article has generalized 3 groups of transforming methods: (1) from congruent expressions to metaphorical expressions, (2) from metaphorical expressions to congruent expressions, and (3) from one metaphorical expression to another. With the quasi-experiential method, the three stages of teaching GM show that transforming congruent expressions to metaphorical ones and from metaphorical expressions to other metaphorical ones often uses nominalization. This process leads to “downgrading”. In contrast, transforming metaphorical expressions to congruent ones tends to “upgrading” without nominalization. In transforming the expressions, most students usually looked back at these in the text "Silent Spring" to better understand their meanings in each context. This is the reason why the paper collected all the samples from the same text.

Through applying GM in teaching, initial results have been very positive. The observation during the research shows that almost all students are very interested in learning GM. The post-teaching GM stage results reflected the improvement of students’ interpreting and creating skills. This is a good sign that GM applications need to be paid more attention to and replicated in language education. In addition, it is important to find ways of making students aware, at a profound and personal level, of what it is that matters when confronted with the complexities
first of understanding and then of producing language for communication (Lian, 1993).
The paper strongly suggests that GM should be widely applied in English teaching. During the application, different types of texts should be chosen to guide students in interpreting texts and creating essays that condense information and demonstrate creativity.

References


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