

## Metaphorical Thinking as a Resource for Idea Engineering Enhancement

Amrin Saragih

Anggraini T Saragih

Rahmad Husein

Universitas Negeri Medan

*Corresponding email: rhnapitupulu@yahoo.com*

**Abstract:**Metaphor refers to transfer of meaning of an entity to another due to similarities between the two entities. By applying metaphorical thinking, one can describe something with reference to something else as there are similar characteristics in a particular way between the two things. The expression of *you're my sun* is derived as the person concerned is regarded as if s/he were the sun that gives light and power in one's life as the sun does in reality. The new worldview derived by metaphorical thinking indicates creativity where a new idea is derived from limited and conventionally known sources by the engineers, technologists and artists. The newly created idea in turn potentially leads to innovation where the new idea is further developed to process, product or service with economically, socially or culturally added values. In this way, metaphorical thinking as a grammatical unit is a means of enhancing idea engineering.

**Keywords:** metaphor, grammatical metaphor, idea engineering, enhancing

### Introduction

Metaphor is concerned with perceiving or coding meaning from two perspectives. The idea of metaphor potentially makes someone perceive or code meaning or objects from two sides of perspective. In other words, metaphor potentially converts one's sensory perception to cognitive one. Idea engineering is about engineers and technologists using creative thinking to form a new worldview leading to innovation (Harris 2014: 96-97). The relation between metaphor and idea engineering is that by using metaphor one can derive a new idea or concept as a creativity and the creativity is then transformed into innovation which has added value. In this way, metaphor as a linguistic aspect is a means of enhancing idea engineering.

### Metaphor

The term *metaphor* was coined by Aristotle, which is from Greek *meta* 'beyond' and *pherein* 'to carry' (Ross 1952). Thus, metaphor conveys meaning beyond that carried by words. Metaphor explains how people conceptualize abstractions in concrete ways (Danesi 2013: 189). In other words, metaphor converts understanding from concrete or sensory to abstract or cognitive perception (Coleman and Kay 2000: 49). Danesi (2013: 189) exemplifies that the meanings of the words *cat*, *table* and *tree* are visible

and concrete whereas that in *life* is abstract and cannot be perceived. However, by comparing *life* to something concrete such as *stage* in the text *life is a stage*, one gains a clear and concrete understanding of what this concept entails

(at least in an imaginary way). With its characters, settings, and plots, the *stage* is felt to be an appropriate analogue for life. The theatre remains, to this day, an overarching metaphor for *life*. The theatre is even commonly used as a term to talk about life. For instance, if someone is asked *what is your life like?* one might get a response such as *my life is a comedy* or *my life is a farce*, from which one can draw real inferences about that person's life.

Halliday (2014: 29) observes that experience is potentially metaphorized. Prior to this, Halliday and Matthiessen (2006: 227) have elaborated that there are two ways of coding meaning or experience, namely coding experience congruently or literally and incongruently or metaphorically. The congruent coding is relocated or transformed to incongruent or metaphorical one by associative thinking (Danesi 2013: 191). In other words, a metaphorical coding inherently contains an association or comparison

where similarities are found between two things or objects.

Lexical metaphor involves (an implicit) comparison between lexical items or words. For example, on one hand the word *snake* in the text *the snake is crawling on the grass* is congruent or literal coding with the word *snake* normally refers to ‘an animal’ or ‘a reptile’. On the other hand, at the lexical level the word *snake* in the text *do not trust Dianne; she is a snake* is a metaphorical coding where *Dianne* is compared to a *snake*. In other words, there is a comparison between two entities: *snake* and *Dianne*. With reference to lexical semantics, the features of the word *snake* are generatively described as [+scale, +coil, +crawl, +venomous], where the sign + means ‘apply’. The four features of *snake* are mapped on to and compared with *Dianne*’s personalities as a human being with the semantic features as [-scale, +coil, -crawl, +venomous], where – means ‘not apply’. The comparison indicates that two out of four features of *snake* are possessed by *Dianne*. In other words, proportionally about 50% of the semantic features of are shared by *Dianne*. As there are similarities between a *snake* and *Dianne* or there coexist features of *snake* and *Dianne*, there is a strong basis or ground to metaphorize *Dianne* as a *snake* as realized in the text *Dianne is a snake*. In lexical metaphor a comparison occurs between two words. Specifically, the meaning of a word is linked to another with reference to similarities. The following examples of lexical metaphor indicates comparisons between

- (1) noun-noun: the *door* of his *heart*, the *root* of the *matter*, the *island* of *hope*, the eye of her *heart*, the *foot* of the *hill*...
- (2) verb-noun: *curbe* his *passion*, *open* his *heart*, *warm up* the *political situation*, an *ideaspark*, *break* the *rules*...
- (3) adjective-noun: *dark age*, *bright future*, *golden age*, *happy hours*, *cloudy life*...

Table 1 Congruent Representation of Semantics in Grammar

Meaning (Semantics)	Function and Grammar	Examples
Thing	Participant/noun	The lady is reading a book.
Activity	Process/verb	The cat <i>ran</i> .
Quality	Attribute/adjective	Ben is <i>handsome</i> .
Relation	Parataxis—	He did not come <i>because</i> it rained heavily.
location, manner	hypotaxis/conjunction	She slept <i>soundly</i> in the room.
comment, judgment	Circumstance/adverb	He <i>may</i> come soon.
Position	Modality	He is <i>in</i> the room.
Quality	Preposition	Ben is <i>handsome</i> .
	Attribute/adjective	

Grammatical metaphor forms when there is a tension or discrepancy between semantics and its coding or realization in grammar (Taverniers: 2003: 22). This is to say that if the congruent coding as summarized in Table 1 is violated or breached grammatical metaphor forms. In other words, grammatical metaphor occurs when there is incongruent realizational relations

- (4) Proper names are potentially metaphorized. In the text *she’s a Mary Robinson* (Griffiths 2006: 88). In this text a proper name is related and compared to someone a *she*. The proper name does not have conventional meaning that language users know from knowing the language, but useful ideas can be evoked by getting people to think of what they believe about the bearer of a name. Out of context, as elaborated by Griffiths (2006: 89) the text *she’s a Mary Robinson* could be intended either literally ‘she is a person who has the name Mary Robinson’ or metaphorically ‘she is a person who is similar in some contextually relevant ways to the law professor Mary Robinson who was president of Ireland and, later, UN High Commissioner for Human Rights’. In the same manner in Indonesian social context of Indonesia *dia sudah jadi si Malikundang* ‘he has been a Malinkundang’ is a metaphorical coding sharing characteristics or personalities of a cursed son known in the mythology of the betrayed son si Malinkundang.

Grammatical metaphor covers ideational and interpersonal metaphor; however, in this paper only ideational metaphor is elaborated. Martin and Rose (2007: 74) observes that there is a common, normal or typical ways of coding meaning in wording. In other words, there is a typical realization of meaning in wording. This typical coding is also known as congruent grammatical coding.

The congruent coding or representations of meaning or in wording or of semantics in grammar are summarized in Table 1. As it is exemplified in Table 1, at the strata of semantics a thing is congruently realized as Participant (in terms of function) or noun (in terms of class or category) at the strata of grammar.

between semantics and lexicogrammar (Halliday 20014: 664). Table 2 summarizes potential incongruent coding or metaphorical representation in English consisting of thirteen categories. As exemplified in Table 2 an adjective which is congruently coded in a certain context such as *an unstable land surface* where quality is coded as

adjective is shifted or relocated (indicated by →) to incongruent or metaphorical representation such as *instability of land surface*. Similarly a *probable solution* is relocated to *probability of solution* or *solution probability* where *probable* as adjective or Quality is relocated to *probability* which is a noun or Thing.

In grammatical metaphor inherently two kinds of relocation occurs simultaneously, namely relocation

Table 2 *Metaphorical Representation*

No.	Class Metaphor	Function Metaphor	Examples
1	adjective → noun	Quality → Thing	unstable → instability probable → probability
2a	verb → noun	Process → Thing	transform → transformation succeed → success
2b	tense/phase verb (adverb) → noun	aspect of Process → Thing	going to/try → prospect/attempt have completed → solution
2c	modality verb (adverb) → noun	modality of Process → Thing	can, could → possibility, potential is required to → duty
2d	verb + adverb/prep. phr → noun	Process + Circumstance → Thing	move in circle → revolution behave badly → misconduct
3	...	...	...
13	Φ → noun [in env. projection]	Φ → Thing	[her success] → the fact of [her success] [my apology] → the act of [my apology]

In English rankshifting of grammatical unit occurs when a grammatical unit is downgraded to the lower ranking grammatical unit as shown in Figure 2. Systematically there are four ranking grammatical units: clause, group/phrase, word and morpheme. Thus, in ideational metaphor a clause is potentially rankshifted to group/phrase as the lower ranking grammatical unit below it, a group/phrase is potentially rankshifted to word, and a word is potentially rankshifted to morpheme. The rankshifting of clausal grammatical units potentially reduces a number of clauses or clause complex into a single clause. Simultaneously, rankshifting potentially condenses a number of clauses or clause complex into a single clause.

Relocation of grammatical class or category refers to the shift of a grammatical class or category to another one as summarized in Table 2. Relocation of ranking grammatical unit entails relocation of grammatical class or category. In other words, relocation of

of ranking grammatical units and that of grammatical class or category. Relocation of ranking grammatical units in ideational metaphor is also termed **rankshited** (Halliday 2014: 303); that is downgrading a grammatical unit to a lower ranking unit below the grammatical unit.

grammatical class occurs is a consequence of relocation of ranking grammatical unit. In English as summarized in Table 2 there are 13 potential kinds of relocation of grammatical class.

For example, the text *Benny was absent because he was ill* is a clause complex consisting of two clauses, namely *Benny was absent* and *because he was ill*. The text congruently codes the meaning as all words as the elements of the clause are congruently mapped on to the grammatical categories as summarized in Table 1. However, the text *Benny's absence was caused by his illness* is metaphorical where the two kinds of relocation (ranking and class) have occurred. Ideational metaphor potentially reduces and condenses meaning of a number of clauses or clause complexes into a group/phrase functioning as a nominal group; which is known as **nominalization** (Halliday 2014: 94). The nominalization has buried all kinds of process into a nominal group.

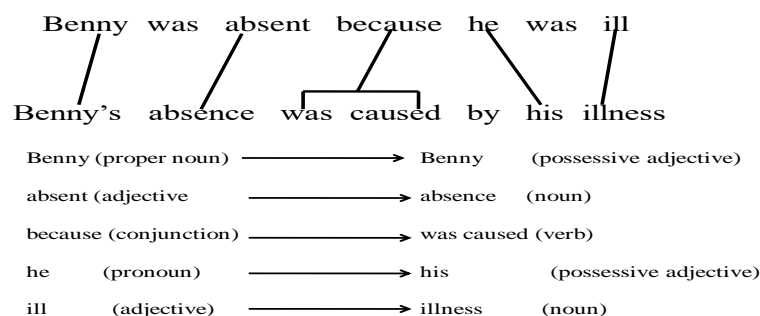
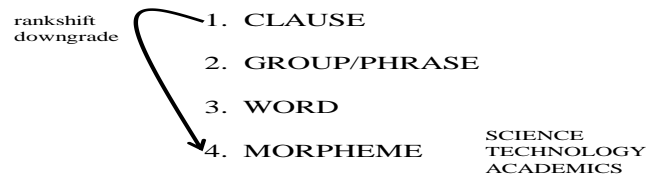


Figure 1: Congruent and Incongruent Representation

Ideational metaphor potentially reduces or condenses a number of clauses or clause complexes into a single clause. The condensation of meaning is firstly done through ranking relocation where clauses are rankshifted into group/phrases. Normally the

group/phrase is transformed into nominalization. Secondly, the nominalizations are joined by applying class relocation. To exemplify, as indicated in Figure 3 there is a text consisting of four clauses.



**Figure 2: Rankshifting of Grammatical Units in Ideational Metaphor**

As specified in Figure 3 the text *the teacher asked the students not to activate their mobile phones in the classroom because the equipments make noises in the room and which disturbs learning atmosphere* is constituted by 4 clauses; they are (1) *the teacher asked the students*, (2) *not to activate their mobile phones in the classroom*, (3) *because the equipments make noises in the room* and (4) *which disturbs learning atmosphere*. The text is congruent in the sense that words as the constituents of the text fulfil the congruent coding specified in Table 1. The metaphorical representation is *the teacher's prohibition for mobile phone activation in the classroom is due to/is caused by noises of the equipments in the room as disturbance for learning atmosphere*. The processes or steps of metaphorization proceed as follows. Firstly, clause 1 and 2 are rankshifted to group/phrase as a, and b respectively. Similarly, clause 3 and 4 are rankshifted to group/phrase c and d respectively. Secondly, group/phrase a and b are combined and simplified into Nominalization X and group/phrase c and d are combined and simplified into Nominalization Y. Thus, there are two nominalizations, namely *the teacher's prohibition for mobile phone activation in the classroom* and *noises of the equipments in the room as disturbance for learning atmosphere*. Finally, the two

nominalizations are joined by using Relational Process *is due to* or *is caused by*. By comparing the congruent and incongruent wordings or by unpacking the incongruent wording, it is found that ideational metaphor representation

- (1) buries all kinds of process into nominalization; it is found that the process *asked* (verbal), *not to activate* (material), *make* (material) and *disturb* (material) are all buried in Nominalization X and Y
- (2) results in Nominalizations, which are linked by relational process (*is due to*, *is caused by*)
- (3) implies that the congruent wordings are associated to common sense experience and incongruent or metaphorical wording are related to texts of science, technology and academics; thus, grammatical metaphor functions to transform common sense to scientific experience,
- (4) implies that the congruent wordings are closely related to spoken texts whereas metaphorical wordings are related to written texts, and
- (5) implies that the congruent text has high grammatical intricacy (GI) but low lexical density (LD) whereas metaphorical text has low GI but high LD where the congruent text has GI=4 and LD =4 and the metaphorical or incongruent text has GI = 1 and LD = 13.

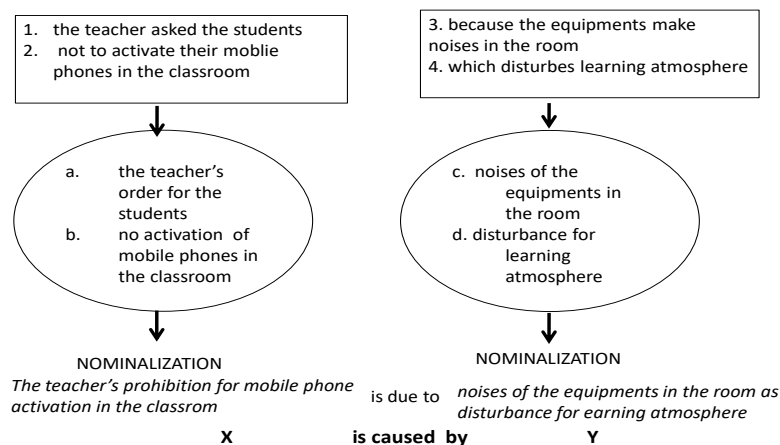


Figure 3: Burial of Processes in Nominalizations and Condensation of Meaning

As experience is potentially metaphorized, metaphors are also applicable to scientific theorising. Metaphors in sciences have certainly facilitated explanations in the popularisation of science. Dirven, Hawkins and Sandikcioglu (2001: 41) exemplify Einstein's metaphor where it is stated that the force of gravity isn't a force at all but is the curvature of space-time. This metaphor has had a great deal of success.

### Metaphor and Imagination

Metaphor functions to convert sensory perception to cognitive one. This is to say that in understanding or coding a meaning metaphorically someone finds that there are similarities between two objects or entities. In other words, features of an entity coexist with those of another. Then, because of the similarities the meaning of an entity is expressed by using the other entity. For example, in *the foot of the hill* it is coded as if the hill had a foot as a person does. Thus, someone views or imagines two objects or things, namely a hill and a person. Both objects have foot or feet. As these features of two entities coexist, the features of one entity are expressed as belonging to the other. This implies that metaphor serves as a means to develop abstract thinking, specifically imagination. In other words, activities related to metaphor done by the learners have shifted their sensory perceptions to cognitive configurations or from concrete to abstract perceptions.

In the field of language learning, Littlemore (2010: 295) has discovered that skills and competences of metaphor have developed in children since the age of four. Specifically, cognitive skills underlying metaphor develop during the Piaget's concrete operations period (four-to-eleven year olds). Further Littlemore (2010: 296) observes that activities related to metaphor have developed (underlying) general cognitive processes including the activation of relevant domain knowledge, imagery, episodic memory, analogical reasoning, categorization, the use of context, associative fluency, and conceptual blending. This is to say that activities related to

metaphor have developed those cognitive competences through the first and second language learning. Further, it has been found that metaphor is associated to creative thinking. It is also found that while doing activities related to metaphor the students or learners are motivated to find similarities that co-exists between or among various phenomena. This leads an idea that metaphor is related to imagination in the sense that metaphor is fueled by imagination.

### Imagination, Creativity and Innovation

Imagination, creativity and innovation are closely related, in the sense that imagination is the source of creativity and innovation is applied creativity. Robinson (2010: 141) elaborates the relationship of the three elements as follows: imagination is the ability to bring to mind things that are not present to one's senses. Someone can imagine things that exist or things that do not exist at all. For example, one can think of an elephant, his/her old school, or best friends and bring to mind the mental images of those objects that are drawn from real experiences. The mental images of real experiences are termed as *imaginative*. More accurately, they are *imaginal*. However, one can think of a green polar bear wearing a dress and can imagine that too. In the case of the polar bear someone is bringing to mind something that s/he has not experienced; at least it is assumed not to exist. These sorts of images are of possibilities composed in the mind rather than recalled to mind. According to Robinson (2010: 142) they are termed *imaginative*. Further, sometimes one mistakes imaginative experiences for real ones. These sorts of experience are termed *imaginary*. Thus, imagination includes imaginal, imaginative and imaginary mental activities. Robinson (2010: 142) continues explaining that imagination is the primary gift of human consciousness. In imagination, one can step out of the here and now and can revisit and review the past. One can take a different view of the present by putting oneself in the minds of others: people can

try to see with their eyes and feel with their hearts. And in imagination someone can anticipate many possible futures. Someone may not be able to predict the future but by acting on the ideas produced in our imagination, s/he can help to create it. Thus, imagination liberates us from our immediate circumstances and holds the constant possibility of transforming the present.

Creativity is applied imagination. In other words, creativity is a step further on from imagination. Imagination can be an entirely private process of internal consciousness. Someone might be lying motionless on his/her bed in a fever of imagination and no one would ever know. Private imaginings may have no outcomes in the world at all. Creativity does. Being creative involves *doing* something. It would be odd to describe as creative someone who never did anything. To call somebody creative suggests they are actively producing something in a deliberate way. People are not creative in the abstract; they are creative *in* something: in mathematics, in engineering, in writing, in music, in business, in whatever. Creativity involves putting one's imagination to work, thus applied imagination.

Innovation is the process of putting new ideas into practice. In other words, innovation is *applied* creativity. By definition, innovation is always about introducing something new, or improved, or both and it is usually assumed to be a positive thing. Whether it is or not, in particular cases, innovation is always a matter of judgment; and judgments can always vary. But the general intention of innovation is beneficial. This implies that innovation is inherently accompanied by added value economically, socially or culturally.

### Metaphor and Idea Engineering

As previously elaborated, metaphor is closely related to cognitive aspects, specifically metaphor involves imagination, which is the basis for creative thinking. As defined by Harris (2014: 97) idea engineering is about engineers and technologists using creative thinking to form a new worldview leading to innovation. In this way, idea engineering is subsumed in creativity and innovation. Thus, metaphor is potentially used to facilitate or to enhance idea engineering.

Robinson (2011: 49) claims that current systems of education were not designed to meet the challenges people are now facing. They were developed to meet the needs of a former age. Reform is not enough: the systems need to be transformed. In other words, the policy of transformative education should be applied. Further, Robinson (2011: 50) has observed that educational systems throughout the world are being reformed due to the fact that graduates of the

educational institutions are faced to problems of the 21st century with multi-dimensional complexities. The reforms almost always focus on 'improving' the existing system. Most countries have a dual strategy, namely access and standards. The first is to increase access to education; especially the numbers of people who go to educational institutions (schools and universities). The demand for educational qualifications grows annually; education and training are now among the world's largest businesses.

The second strategy is to raise standards. Educational standards *should* be high and it is obviously a good idea to raise them. There is not much point in lowering them. Educating more people and to a much higher standard is vital. But they are also educated differently. Education is not an impartial process of developing people's natural abilities and it never was. Systems of mass education are built on two pillars. The first is economic: they have been shaped by specific assumptions about labor markets, many of which are now hopelessly out of date. Related to raising the standards or quality of education is creativity since creativity is possible in every discipline and should be promoted throughout the whole of education.

Educational systems at Universitas Negeri Medan (the State University of Medan) known as Unimed need revising and upgrading to cope with the graduates' present needs in the 21st century. Since 2016 in line with the KKNI-based curriculum, the Unimed has set up idea engineering as a policy. Operationally, the students of the Unimed are assigned to idea engineering where they are expected to think creatively and innovatively. One of the means to develop and enhance idea engineering is through the application of metaphorical thinking.

### Developing Idea Engineering by Using Metaphorical Thinking

Idea engineering is not a common practice in schools or higher education institutions in Indonesia. However, a related practice is common particularly at the elementary schools, which is known as *mengarang* 'composing'. This is done in the lesson of writing. Typically, the learners are asked to write a story which is or is not based on their experience. Thus, the composed story may be factual or fictitious. The activity of *mengarang* is sporadically done with no systematic procedures or techniques and is carried out at the teacher's disposal. The learners' writings may or may not be assessed by the teacher. In the case the learner's writing is assessed, an individual learner's writing is read to the whole and the teacher assesses the learner's work by using uncertain criteria. Sometimes the criteria are irrelevant, such as the cleanliness of the paper or eligibility of hand writing.



At the Unimed, due to the requirement of the KKNi-based curriculum the students have been exposed to idea engineering since their early years and are required to do idea engineering in all the lectures attended. The lecturers apply their own methods and techniques in doing idea engineering. The present writers propose the device for developing idea engineering by using metaphorical thinking covering the following systematic structures: **sources of idea**  $\wedge$  **focus of imagination**  $\wedge$  **ideas developed**  $\wedge$  **innovated idea**.

At the stage of **source of idea** the students are asked to discuss a topic or phenomenon from which a new idea is potentially derived. The sources of ideas cover a wide range of areas such as a textbook, a theory, a current social issue, publication in social media, local wisdom, oral tradition, local traditional medicines, etc. The sources of ideas are also potentially from various subjects or disciplines, such as science, technology, arts, humanities, and mathematics. The students in groups at this stage are asked to discuss a certain topic and present their ideas about their topics or subject matters to the whole class.

At the stage of **focus of imagination** the students in groups select ideas that they want to focus on. There may be more than one idea to focus on. It depends on the group decision to determine the focus. Obviously the selection of ideas is based on reasons or criteria. The lecturer's role is mainly to facilitate, guide or scaffold the students' activities so that they arrive at finding relevant ideas.

At the stage of **ideas developed** the students are expected to link the selected ideas at the previous stage to other ideas from different sources. The links between the selected ideas and other ideas from different sources are expected to derive a new idea creatively. This is to emphasize that at this stage the students are asked to metaphorize ideas and realize them in texts. The metaphorical ideas are considered to be the students' creativity.

At the stage of **innovated idea**, the students are asked to describe implications of the created ideas or their creativity at the previous stage to the current or future situations. In other words, specifically the creativities are evaluated with reference to the added values, which may be economical, social, political or cultural. The added value may also be involving local, national, regional or even global interests.

Activities in the idea engineering using metaphorical thinking are exemplified in the following by referring to the social context of Indonesia. The activities are done through the four stages.

### (1) Source of Idea

The students are asked to discuss two ingredients, cooking and preparation of two famous traditional cuisines of Indonesia namely, *gado-gado* (salad-like food) and *kari kambing* 'curried mutton'. The ingredients of *gado-gado* are cabbage, celery, potato, bean shoots, tofu, tempe (fermented bean), bean sauce (as the dressing) and those of *kari kambing* are mutton, chilly, shallots, garlic, onions, salt, pepper, coconut milk. The students list the ingredients and they talk about the ways to cook and serve the two traditional foods.

### (2) Focus of imagination

The students are exposed to the question of *why is it called gado-gado and curried mutton?*. On one hand, the *gado-gado* is constituted by many ingredients and all the cooked ingredients are subsumed, represented by and named after the word *gado-gado* in which none of the ingredient are represented. On the other hand, the phrase *gulai kambing* represents the food by the name of one of its ingredient, namely *kambing* "goat or mutton". The *gulai kambing* is constituted by many ingredients and after being cooked the food is named *kari kambing* where *kambing* is an ingredient. Thus, the two kinds of food are represented differently: *gado-gado* is represented by none of the ingredient whereas *kari kambing* is named after or represented by one of the ingredients, namely *kambing*.

### (3) Idea developed

After finding the different backgrounds of naming *gado-gado* and *kari kambing*, the students are exposed to (underlying meaning of) the DPR 'parliament of Indonesia'. The students are asked to metaphorize the parliament with the *gado-gado* and *kari kambing*. Specifically, the underlying meanings or ideas in the *gado-gado* and *kari kambing* are compared with those of the parliament. It is found that only the *kari kambing* has similarity to the DPR in that a member of parliament (MP) represents populations of Indonesia and in the same manner the *kari kambing* represents all the elements or ingredients that constitute it. Thus, the parliament is analogous to the *kari kambing* where there are a number of ingredients but all of the ingredients are represented by the word *kambing*. Then the *gado-gado* and *kari kambing* are metaphorized with a tree. It is found that only *gado-gado* matches with (underlying meaning of) the tree in that all ingredients are subsumed under the name *gado-gado* and all of the elements: root, trunk, branch, twig, leaves, bloom are subsumed under the name tree. Further, the students are exposed to the idea of Inggris 'English' in Indonesian context. Inggris (also known as the UK) is constituted by sub-ethnic groups of English or Inggris, Welsh, Scottish and Irish. English or Inggris is used to represent the four

ethnic groups. In a different manner Indonesia is constituted by many ethnic groups. If the use of language equals with ethnic group then it is found that there are 746 ethnic groups in Indonesia. The word Indonesia is used to represent the 746 ethnic groups. By metaphorizing *gado-gado* and *kari kambing* to Inggris and Indonesia it is found that *kari kambing* to Inggris/English is like *gado-gado* to Indonesia. This is semiotically (Winfried 1990: 72) symbolized as ***kari kambing* : Inggris/English :: *gado-gado* : Indonesia**, where : means 'to' and :: 'as'. Semantically, two meaning relations of hyponymy and meronymy are found. Meronymous relations form in the *gado-gado* and *karikambing* whereas hyponomous one in Inggris/English.

#### (4) Innovated idea

The semiotic relation in ***kari kambing* : Inggris/English :: *gado-gado* : Indonesia** is a new idea developed by applying metaphorical thinking and at the same time has added value culturally. Culturally, one of the added value of the derived idea is that such an expression can be used as anecdote. As an anecdote, in the use of language, it is potentially used to amuse, downgrade, mock, shock, or pull someone's leg. Further, the meaning relation is potentially used in the pantoun as the following.

*Anak Inggris melempar lembing;  
Gado-gado di atas mempelam.  
Jangan berulah seperti kambing;*

#### References

- Danesi, M., 2013, Encyclopedia of Media and Communication (Toronto: University of Toronto Press).
- Dirven, R., B. Hawkins and E. Sandikcioglu., 2001, Language and Ideology: Theoretical Cognitive Approaches (Amsterdam: John Benjamins).
- Griffiths, P., 2006, An Introduction to English Semantics and Pragmatics (Edinburgh: Edinburgh University Press).
- Halliday, M.A.K. and C. M. I. M. Matthiessen., 2006, Construing Experience through Meaning: a Language Based Approach to Cognition (London: Continuum).
- Harris, La Verne A., 2014, Idea Engineering: Creative Thinking and Innovation (New York: Momentum Press).
- Littlemore, J., 2010, Metaphoric competence in the first and second language: Similarities and

*Indonesia menandainya hitam.*

The innovated idea indicates meaning relation between taste (of food) and inter-and intra-ethnic relation. How well is taste relation and human relation related. Does taste have effect on human relation? Further study is potentially conducted on this matter.

Metaphorical relation potentially occurs in all disciplines as all kinds of experience are potentially metaphorized. Thus, idea engineering can be developed in the following fields or disciplines.

#### Conclusions

Metaphorical thinking refers to mental activities whereby similarities are identified between two things or entities in terms of certain criteria. Due to the similarity the meaning of one thing is expressed by the other thing. Metaphorical thinking functions to convert concrete to abstract thing or sensory perception to cognitive one. Metaphorical thinking potentially involves imagination and by means of imagination someone can create a new idea. The creativity results in new perception of the world or new idea. Once the new idea brings about added value it is known as innovation, which is the end product of idea engineering. Thus, metaphorical thinking is a resource potentially applied to intensify or to enhance idea engineering.

differences. In Cognitive Processing in Second Language Acquisition, edited by Putz, M, L. Sicola, (Amsterdam: John Benjamins).

Lotman, L., 2009, Culture and Explosion (Berlin: Mouton de Gruyter).

Robinson, S. K., 2011, Out of our Minds: Learning to be Creative (Chichester: Capstone).

Ross, W. D., 1952, Rhetoric: the Works of Aristotle (Oxford: Clarendon Press).

Taverniers, M., 2003, Grammatical Metaphor in SFL: A historiography of the introduction and initial study of the concept. In Grammatical Metaphors: Views from Systemic Functional Linguistics edited by Vandenberg, A.M, M. Taverniers and L. Ravelli (Amsterdam: John Benjamins).

Winfried, N., 1990, Handbook of Semiotics Advances in Semiotics (Bloomington: Indiana University Press).