

A SEMANTIC ANALYSIS ON SPOTIFY TOP SONGS FOR TEENS

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Abstract

Songs was stated as a learning material in Curriculum 2013. Teachers are expected to teach the students on the social function and linguistic elements embodied in song lyrics. Moreover, the teachers could use Spotify as a media to provide songs for learning materials because Spotify was one of the well-known music platform. However, not all songs in Spotify were suitable enough for learning material. Therefore, this research was aimed to examine content words found on the top five songs lyric on Spotify. The analysis used Semantic Analysis which is a method to classify words according to their meanings. The analysis showed all of the lyrics frequently used Human noun, action verb, mental verb, stative and personal opinion adjective.

Keywords – *semantic, Spotify, songs, content words*

Introduction

Spotify is one of the biggest platforms of music streaming with 140 million active users around the world (Cummings 2016). Around 72 percent from the total users are young generations. Indonesia becomes one of the countries with fastest growth of users in Southeast Asia (Kompas, 2016). According to Sunita Kaur (2016), Managing Director of Spotify Asia, most of the spotify users in Indonesia listen to music around 90 minutes per day (Kompas, 2016). However, she does not explain further regarding to the total number of users in Indonesia.

This phenomenon is closely related to the instructional practices in Indonesia as songs is stated to be learned as stated in 2013 Curriculum. This is stipulated in Permendiknas Nomor 24 Tahun 2016 and teachers are expected to teach the students on the social function and linguistic elements embodied in song lyrics. Relevant to this, Indonesian teachers can exploit the Spotify as a media to provide songs for learning materials.

Many researchers agree that Spotify is a well-known music streaming application for younger generations (Cummings, 2016; Riesewijk, 2017; Swanson, 2013). However, those researchers do not elaborate further on the use of Spotify in English teaching. They agree that Spotify is widely accessed by many people and provides a good quality of music. The music can be accessed offline. This application also provides three types of accounts: Spotify Free, Spotify Unlimited and Spotify Premium, to choose.

Not all of songs in Spotify are suitable enough as learning materials. The Curriculum 2013 emphasizes to build students' characters, developing relevant skills based on students' interests and needs, and developing a thematic approach that benefits students' cognitive abilities (Gunawan, 2017). It means that teacher should select the songs based on the goal of the curriculum. The teacher should select them carefully whether the songs are appropriate or not. The kind of songs should fulfill the criterion found on the goal.

Selecting songs from Spotify can be done by analyzing the lyrics using semantic analysis. It is used to show if the song lyric provides meaningful information and which can be used as learning materials for the instructional purposes. Many studies which have been conducted



explored the semantic analysis of song lyrics (Logan, Kositsky, & Moreno 2004; Mayer, Neumayer & Rauber, 2008; Downie and Hu, 2010) but it is still hard to find the one relates to songs available in Spotify platform.

In this paper, the researcher explores the semantic analysis on song lyrics in Spotify. The analysis is narrowed into analyzing the content words on the lyrics. It will elaborate what kinds of content words mostly appear in the lyric and which kind of information is provided in the song lyrics. In specific, this paper is therefore to answer the following questions:

1. How are content words categorized based on meaning?
2. How frequent is each content words appeared on the song's lyrics?

One of the materials taught in high school is song. It is stated in Curriculum 2013, and stipulated in Permendiknas Nomor 24 Tahun 2016 that teachers are expected to teach the students on the social function and linguistic elements embodied in song lyrics. Using song as learning material has many advantages. For instance, songs can be a source for cultural and historical knowledge (Kuśnierek, 2016). Song or music is a reflection from time and place that produced it. It means that teachers as well as students can use it as a way to look at a culture and contrasting it with other cultures. Kuśnierek (2016) also explains that through songs, students can gain linguistics knowledge. Thus statement is supported by Żogota (2011) that song is a language package that consist of vocabulary, culture and language skill.

In order to find suitable songs for learning material, this research uses semantic analysis to analyze the lyrics. Semantic analysis is a method which classifies words according to their meanings (Krippendorff, 2004). It is used to show if the song lyric provides meaningful information and which can be used as learning materials for the instructional purposes. Moreover, in the semantic field, Ferdinand de Saussure (1916) said that there are two main types of relation between words, paradigmatic and syntagmatic. The term of paradigmatic relation allows items from a semantic set to be grouped together. It means that the words have semantic similarity (Rapp, 2002).

Logan, Kositsky, & Moreno (2004) on their research using Probabilistic Latent Semantic Analysis (PLSA) only provide information on the similarity of the lyrics. Meanwhile, Mayer, Neumayer & Rauber (2008) gave the information about genre classification of song through analyzing the part of speech. More specifically, Downie and Hu (2010) analyze the song lyrics to classify the song mood. All those studies use semantic analysis. Same goes with this research that will conduct by using semantic analysis. In this paper, the analysis is conducted to find the information from the lyrics for the academic usage. Particularly songs from the online music platform, Spotify, are suitable or not as learning materials.

The first step is selecting the top songs from Spotify platform. Then, it is followed by analyzing the lyrics using semantic analysis. This is narrowed into analyzing the content words found in the lyrics. Therefore, classifying the content words found in the lyrics discover the meaning of the songs. In the last step, deduce the information to determine whether the songs found in Spotify are suitable or not as learning materials.



Methodology

Data collection

The songs used in this research were collected from Top Songs 2018 from the Spotify Platform. Different genre can be found in the top song list. There are 30 songs for the Top Songs 2018. This study selected the first five top songs to analyze its lyrics using semantic analysis. The first five top songs were selected because they were the most popular and most played in 2018. It was a great advantage that Spotify does have lyrics features when the song was chosen. This lyrics feature is only available in English and in specific song or playlist.

Data analysis

This research is to aim to explore which kinds of content words frequently appear in the song lyrics. The first step to analysis is to identify the content words used in the songs. Abrusán, Asher and Van de Cruys (2018) say that content word is a reflex of knowledge words. It means that content word is a word that conveys information in a text or speech act in English grammar and semantics (Nordquist, 2018). On the other words, content words cover nouns, verbs, adjectives, and adverbs as a type of content words to be able to take a part in productive compounding and derivation (Schmauder, Morris & Poynor, 2000; Nordquist, 2018). It means that, each types of content words found in the song lyrics represent the song's meaning.

The term compounding means the combination of two or more words and derivation is characterized by the addition of an affix, particularly a bound morpheme to the word (Booij, 2005). It was important to consider both terms of process in this research because it made easier to distinguish each type of the content words. How a word could change its function and type based on its meaning.

The next step was to make classification of the content words by their meaning. Before making classification, the researcher read the whole lyric to find what is the song about or the theme of the song. Then, selected the possible content words which represent the song theme. The information represented in the song was based on the most frequent of content words. Then, concluding which kind of songs was appropriate as a learning material using the information that can be found.

Findings and Discussion

A content word is a word that has meaning to label an object or action. Hence that content words have strong syllables, partake in productive compounding and derivation of words (Carlson & Tanenhaus, 1984; Sweet, 1891 in Schmauder, Morris & Poynor, 2000). In fact, content words cover nouns, verbs, adjectives, and adverbs as a type of content words to be able to take a part in productive compounding and derivation (Schmauder, Morris & Poynor, 2000; Nordquist, 2018).

This research is conducted to find the categorization of content words and what kinds of content words mostly appear in the lyric. The tables below provided content words class based on their meaning as stated in several resources.



Noun Class

Table 1. Noun classification

Types of noun	Title of songs				
	God's Plan	In My Feeling	Psycho	Rockstar	SAD!
Event	-	3	2	5	2
Human	12	19	21	32	7
Concrete	2	2	5	-	-
Semiotic	8	13	24	16	2
Location	6	1	2	4	1
Matter	2	3	4	2	-

A noun is a word or word group that can be used to refer to a person, animal, place, thing, phenomenon, substance, quality, or idea (merriam-webster.com). The table 1 showed the noun classification according to Bel, Romeo, and Padró (2013). There were six types of noun, Event, Human, Concrete, Semiotic, Location, and Matter.

The researcher classified the nouns found in the lyrics based on their similarity in their meaning and usage. Human nouns would represent the subject of the agentive verb. It meant that the subject receives the action of the verb and denotes intelligent acts. Concrete nouns were nouns that refer to things that exist physically and can be touched, seen, smelled, felt or tasted. The Location nouns refer to places or geographical names whether Event nouns referred to object of the agentive verb. However, Semiotic nouns represented sign or symbol and Matter noun can be numbers or something that can be counted.

Surprisingly, the result on noun classification showed that in all songs, Human nouns were found more in the lyrics. This meant that all of songs were talked about the subject or who did the action. However, Semiotic nouns also found with remarkable amount on the song lyrics. It could be concluded that on the song lyrics symbol or sign was used to represents something that the singer or the writer wanted to tell to the audiences.

Verb Class

Table 2. Verb classification in the grammar rules.

Types of verb	Title of songs				
	God's Plan	In My Feeling	Psycho	Rockstar	SAD!
Mental	8	6	4	4	4
States of being	2	4	3	6	3
Action	17	32	36	40	10
Auxiliary	5	6	7	3	3
Stative	3	2	4	5	2

Furthermore, Korhonen and Briscoe (2004) divided further into several classes based on Levin (1993). It also supported in the article wrote by Korhonen and Ryant (2005). Mental verbs had meanings that are related to concepts such as *discovering*, *thinking*, *understanding*, *senses*, or *planning*. States of being was a concept that described situations or conditions that exist or also known as linking verbs. Action verbs expressed specific actions such as *consuming*, *enforcing*, *ordering*, *trying*, *allowing*, *uttering*, *seeing*, *occurring*, *forcing* and many others. Then, auxiliary verbs were also known as helping verbs and used to let the reader know when the action took place. For instance, *have*, *might*,



should, do, can, could, may, will, would, did were included in auxiliary verb. Moreover, stative verbs expressed a state rather than an action such as a state of doubting, state of believing and state of wanting.

Adjective Class

Table 3. Adjective classification

Type of adjectives	Title of songs				
	God's Plan	In My Feeling	Psycho	Rockstar	SAD!
Determiners	2	2	2	2	-
Personal	7	5	10	9	5
Size	-	-	2	2	-
Shape	-	-	1	-	-
Age	-	1	1	1	-
Colour	-	1	1	1	-
Order	-	-	1	-	-
Amounts	-	-	1	-	-

Adjectives are a word that modifies a noun or describes a noun's referent by providing descriptive or specific detail. Sherman et al (2010) in SWC provided eight types of adjectives by their order and placement. They were determiners, personal opinion, size, shape, age, color, order and amounts.

As we can see from the table 3, all of the songs have personal opinion type in their lyrics. This suggested that the five top songs were a personal message. Surprisingly, Psycho song had all type of adjective which was amounts adjective. On the other hand, SAD! only had one type of adjectives which represented the message as well as the title.

Adverb Class

Table 5. Adverb Classification

Types of adverbs	Title of songs				
	God's Plan	In My Feeling	Psycho	Rockstar	SAD!
Time	3	3	3	3	2
Degree	1	-	2	-	1
Manner	3	1	1	-	2
Place	3	4	8	15	1
Frequency	2	5	2	-	-
Interrogative	1	-	2	2	2
Conjunctive	-	5	6	1	2

An adverb was a word that modifies a verb, adjective, other adverbs, or various other types of words, phrases, or clauses (Halling, 2018). Table 1.4 provides data of adverb class found in the top five songs. The classification based on Bonami, Gorard, and Kampers-Manhe (2004) who made several classification of adverbs in France.

Each of songs has adverb of time and adverb of place on their lyrics. Nevertheless, not all of songs found to have adverb of degree, adverb of frequency, adverb of manner, interrogative adverb and conjunctive adverb. Surprisingly, Psycho song found to have all kinds of adverb on its lyrics.



Content Words Frequently Appeared on Lyric of God's Plan by Drake

Table 6. The result obtained from the analysis of God's Plan by Drake

Content words	Class	Sample	Frequency
Noun	Human	They	12
	Human/ Event	Me	17
	Concrete	It	8
	Human	I	18
	Semiotic	Things	5
Verb	Mental	Wishing	25
	States of being	Is	5
	Auxiliary	Do not	5
Adjective	Personal opinion	Bad	5
	Personal opinion	Hard	2
	Personal opinion	Close	2
Adverb	Place	Down	3

Human nouns were mostly appeared on the God's Plan lyric. The noun *I* is particularly get the higher frequency followed closely by noun *me* as Human and Event noun. Furthermore, mental verb *wishing* was often appeared with total 25 times. This meant that the song was being told in the writer point of view and the said person was expecting for something.

Content Words Frequently Appeared on Lyric of In My Feelings by Drake

Table 7. The result obtained from the analysis of In My Feelings by Drake

Content words	Class	Sample	Frequency
Noun	Human	You	44
	Human	I	32
	Human	Me	16
	Semiotic	A*s	13
	Concrete	It	7
Verb	Action	Got	7
	Stative	Want	6
	Stative	Need	7
	States of being	Am	8
	Action	Bring	8
Adjective	Action	Clap	7
	Colour	Black	2
Adverb	Personal opinion	Bad	3
	Shape	Real	2
	Place	Down	8
	Frequency/ time	Always	7
	Manner	Back	6

The result on table 7 indicated that Human noun *I*, *you* and *me* were mostly appeared on the song lyric. Then it followed by semiotic noun. However, the word *you* was 44 times appeared, so it can be concluded that the song was telling about someone and intended to the said person. Stative verb *need* indicated that the writer had desired of something to the intended *you* on the song lyric.



Content Words Frequently Appeared on Lyric of Psycho by Post Malone

Table 8. The result obtained from the analysis of Psycho by Post Malone

Content words	Class	Sample	Frequency
Noun	Human	My	24
	Human	You	18
	Human	I	14
	Semiotic	AP	7
	Semiotic	Mama	7
	Concrete	Jewelry	7
	Location	Roof	7
	Concrete	Diamonds	8
Verb	Action	Going	12
	Mental	Like	13
	States of being	Am	7
	Action	Got	7
Adjective	Size	Little	7
	Personal opinion	Psycho	7
	Personal opinion	Bad	6
Adverb	Degree	Really	6
	Interrogative	When	4

As we could see from the table 8, Human nouns were frequently appeared on the song lyrics. Surprisingly, Concrete noun *diamonds* found eight times. Furthermore, mental verb *like* that expressed the concept of liking was appeared 13 times. From the adjective class, personal opinion *bad* was highly found on the lyric. This meant the song told the listener about the writer's fondness toward certain someone. Nevertheless the word *bad* could possibly brought negative and positive effect toward the meaning. It could be that the writer was really fond of something or someone, or it could be said *bad* as the meaning itself.

Content Words Frequently Appeared on Lyric of Rockstar by Post Malone

Table 9. The result obtained from the analysis of Rockstar by Post Malone

Content words	Class	Sample	Frequency
Noun	Human	I	15
	Human	They	10
	Semiotic/ event	Rockstar	12
	Human	My	8
	Human	Man	6
Verb	Action	Got	10
	Stative	Like	13
	States of being	Am	5
	Stative	F*cking	6
Adjective	Age	Old	2
	Personal opinion	Hard	2
Adverb	Time/ frequency	Always	5

The result on table 9 showed that though the title was Rockstar, *I* was the human noun that frequently appeared on the lyric. Then, the stative verb *like* found 13 times and it could



represent as the concept of wanting. From the two words that mostly came into view on the lyric, the meaning could be that someone had desire to be a rockstar. The word *rockstar* could be interpreted as someone who was famous.

Content Words Frequently Appeared on Lyric of SAD! by XXXTENTACION

Table 10. The result obtained from the analysis of SAD! by XXXTENTACION.

Content words	Class	Sample	Frequency
Noun	Human	I	36
	Event	Me	8
	Human	You	22
	Semiotic	Someone	6
	Event	Suicide	7
Verb	States of being	Am	18
	Mental	Know	18
	Action	To let go	14
	Mental	Decide	7
	Action	Try	7
	Action	Let	7
	States of being	Is	8
Adjective	Personal opinion	Afraid	6
	Personal opinion	Sad	13
Adverb	Degree	Ever	12
	Interrogative	Who	6

On the table 10 could be seen the Human noun *I* and *you* were frequently found. The word *I* was represented the writer point of view and *you* could be said as someone who the writer aimed. The action verb, *know*, indicates that the writer understand the matter and *to let go* had meaning that the writer was giving up to the said matter. It was also clarified by the adjective *sad* and *afraid* about the writer's feeling when he/she giving up. This can be concluded as a whole meaning that the song told the listener about the writer's feeling when he or she giving up to someone.

Conclusion

Spotify provided popular songs for nowadays teenager. Nevertheless, if the songs were used for academic material, not all of them were suitable. For instance, the songs *In My Feeling* and *Rockstar* were not appropriate for learning material because the lyrics contained swearing and bad words. Furthermore, in the case of meaning, the songs *God's Plan* and *SAD!* were suitable enough for learning material, particularly *God's Plan* because it had meaning that represented the goal of Curriculum 2013.

As for the content words classification, all of the songs used Human noun and the majority of Human noun were subject that indicated the writer's point of view. Furthermore, the adjective that represented personal opinion were found mostly on the song lyrics. Nevertheless, only one song could be found use an adverb that represented amounts on its lyric.



References

- Abrusán, M. Asher, N., and Van de Cruys, T. (2018). Content vs. function words: The view from distributional semantics. *Proceedings of Sinn und Bedeutung 22*. Vol.1,ZASPIL,60, pp.1-21
- Bel, N. Romeo, L., and Padrò, M. (2013). *Automatic lexical semantic classification of nouns*. Barcelona: Universitat Pompeu Fabra
- Bohang, F. K. (2016). *Orang Indonesia Dengar Lagu di Spotify 90 Menit Sehari*. Kompas Tekno. KOMPAS.com
- Bonami, O., Godard, D., and Kampers-Manhe, B. (2004). *Adverb classification*. Retrieved from <https://pdfs.semanticscholar.org>
- Booij, Geert. (2005). *Compounding and derivation: evidence for Construction Morphology*.
- Cummings, C. (2016). *Infographic: 72% of Spotify Listeners are Millennials. Here's How They Use the Service*. AdWeek.co

