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Analysis Of Content-Based Tag on Youtube 'Brain Music'

Zayyin Abdul Quddus[1], Rayhan Musa Novian[2]
Program studi Sains Informasi, Universitas Pembangunan Nasional Veteran Jakarta, [2] Department of Library Science, Chulalongkorn University
[1] zayyin_abdul@upnvj.ac.id

ABSTRACT

This paper presents a text analysis on 50 tags from the YouTube platform "Music Brain" using several tools which are provided by Voyant Tools (voyant-tools.org). It is expected that patterns, networks, and a comprehensive analysis of the Tags 'Music Video' would be generated. As a result, In this study, video tags are analyzed using text mining techniques and voyant tools. Although Voyant Tools is equipped with 28 tools, only five were utilized in this analysis. There are homonymous keyword tags in this study, such as 'Study,' 'Studying,' 'Concentration,' 'Focus,' 'Meditation,' and 'Relax.' Due to implementing folksonomies in Youtube Tags, make it easier for individuals or groups to find content based on common words and create duplication tags meaning

Keywords: Folksonomies; Tagging; Voyant-Tools

1. INTRODUCTION

In organisation of information, we acknowledge the concept of classification to facilitate the organisation, arrangement, and retrieval of information. The classification scheme, such as the Dewey Decimal Classification or the Library of Congress Classification Subject Heading, is based on the subject heading (LCSH). This method is known as controlled vocabulary, and it already has a binding subject-matter determination. Subject headings, the words or phrases chosen from controlled vocabularies to describe the subject or classification of a document, are frequently used in library catalogues and document collections to facilitate information retrieval, indexing, categorization, etc. (Yu & Chen, 2020).

Currently, developments in information technology facilitate sharing and collaboration on social media platforms. This enables everyone to simply contribute their knowledge, experiences, and perspectives on social media. In the middle of the 2000s, social media and the Internet changed. When everyone can access the internet and collaborate on personal experiences, people tag a document file, image, book, movie, etc. to make it easier to get the material they are engaged in, these are known as folksonomies. Yu & Chen (2020) stated that since web interaction and community participation have increased, folksonomies and social tagging have become increasingly popular.

Folksonomy is a combination of the word's *"folk"* and *"taxonomy*." It refers to the system wherein people apply public tags to online things, often to help them retrieve those items again. This method is also known as social tagging and collaborative tagging, because users themselves tag the things, folksonomies directly reflect the terminology of users/taggers (Gupta et al., 2011). Folksonomy is frequently utilised in content repositories or social bookmarking projects or websites such as del.icio.us, Flickr, CiteULike, etc. Social tagging systems are becoming essential for information classification and social tagging behaviours, such as searching and recommending. (Hu et al., 2018). Users/Taggers can share nearly any type of content (including bookmarks, blogs, images, and music) by saving the content and freely assigning various tags to it. This was made feasible using tags. Additionally, users/taggers can assign tags to resources that belong to other users. This type of tagging is also referred to as "social tagging" or "collaborative tagging." (Lee et al., 2012).

The most fundamental distinction between taxonomy and folksonomy is the concept of parent-child term. A taxonomy is a controlled vocabulary that incorporates parent-child words into its schema. Taxonomies are hierarchical as well. The most common taxonomy is the Dewey decimal classification, which separates knowledge into ten classes and includes the following notations following the main table.

On taxonomy with controlled vocabulary to establish hierarchies and correlate words based on fundamental concepts in order to adapt terms including homonyms. As an illustration, consider a bank in the economic system and a bank as component of riverside. Because there is no hierarchical word structure, folksonomy is viewed as a user-generated pattern. The associations between tags in a folksonomy are inferred based on usage trends. A folksonomy contains no formal relationships other than a "degree of relatedness." (Smith, 2008).

YouTube is an enormously popular social media video player. The uploaders of the videos include tags to make it easier for YouTube users to identify the connection between the uploaded content and a certain subject. This makes it easier for YouTube users to find videos on the platform with related subjects. Tags portend significant shifts in the way we manage information. These improvements are in part attributable to the information explosion we have been experiencing and the requirement for purpose-built solutions for our new always-on ubiquitous information environment.(Smith, 2008).

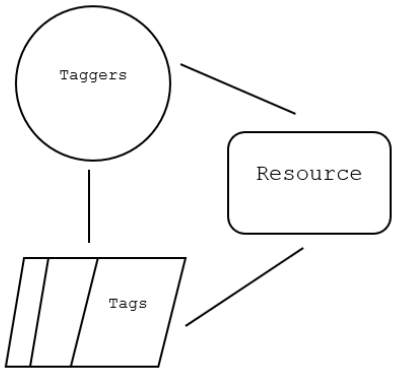

Figure 6
Tagging Systems (Source: Gene, 2011)

Gene (2011) describes a concept to understand tagging in a primary way, which is as follows:

Gene (2011) explains this concept starting from Taggers, Resource and Tags.

1. Taggers/Users : Taggers are people who tag information sources. This is done to make it easier to retrieve the content they need or are interested in.
2. Resource : Taggers/Users can add tags to various items to create resources. A resource can take the form of almost anything, including a book, a website, a video, or even a physical location. Anything that can be assigned a one-of-a-kind identifier will be able to have a tag placed on it.
3. Tags : Tags are comprised of the terms that users have added. As a result of the open-ended character of tagging, tags can refer to virtually any form of term. They may serve as a reminder, a description of the resource's subject matter, its location, the purpose for which it was created, or perhaps something totally else.

Taggers, resources, and tags therefore have a relationship. This relationship is possible due to the link; the users/taggers tag the resource because they believe it reflects their perspective and the presence of a tag in the resource (video, photo, bookmarks). After being

tagged by other users or authors, resources make it easier for other users to access similar content; the relationship between these three elements in a system forms the fundamental concept of tagging.

In this paper, the author attempts to analysis the pattern of tags appearing in 50 videos on the YouTube Platform. The author used ‘’Brain Music’ only for this analysis. The author analyses by utilising the tags in the Youtube video. the author managed to collect 50 videos themed on ‘Brain Music’. This is intended to get a pattern and an idea of how many tags are used to mark videos related to 'Brain Music.'

2. METHODS

In this paper, the author takes 50 videos related to 'Brain Music' on YouTube. After collecting tags based on 50 videos on YouTube, the author got 2501 words based on Tags from 'Brain Music'. To analyse the Tags, the author uses VoyantTools as a Text Mining tool.

Voyant Tools is a web-based platform for frequency-based text analysis. The environment is extended by 29 visualisation tools that rapidly obtain linguistic and statistical characteristics (Alhudithi, 2021). Voyant provides a collection of 29 analytical tools, all of which are backed by highly dynamic and rich visual effects. Voyant Tools has 29 Tools to perform text analysis, which are as follows.

1. Topics	9. Document	17. Bubblelines
2. Context	10. Summary	18. Scatterplot
3. Mandala	11. CorpusTerms	19. Veliza
4. Terms	12. Knots	20. Catalogue.
5. Microsearch	13. TermsRadio	
6. Dreamscape	14. SteamGraph	
7. RezoViz	15. Trends	
8. Reader	16. Cirrus	

In this paper, the author performs text analysis on 50 tags from the YouTube video "Music Brain" using several tools which is provided by Voyant Tools. By applying Voyant Tools, it is expected that patterns, networks, and a comprehensive analysis of the Tags 'Music Video' would be generated.

3. RESULTS AND FINDINGS ANALYSIS

Voyant Tools (voyant-tools.org) is one of the user-friendly and well-documented open-source web-based text analysis tools accessible. This web-based collection of tools features an easy-to-use interface and does not require the creation of an account (Miller, 2018; Sampsel, 2018). Voyant Tools is a web-based text reading and analysis environment capable of handling various input-compatible formats, including URLs, plain text, HTML, XML, PDF, RTF, and MS Word. Voyant Tools also provide multiple languages to analyse, such as English, Arabic, Bosnian, Czech, French, German, Hebrew, Italian, Japanese, Portuguese, Serbian, and Spanish (Alhudithi, 2021; Miller, 2018).

The results of Cirrus and WordsTree through Voyant Tools found that the word 'Music' was the most mentioned word in the Tags that the author entered. In Cirrus (figure 2), the author utilises text mining with only 25 words to identify that

Figure 2
Term Cirrus Visualisation

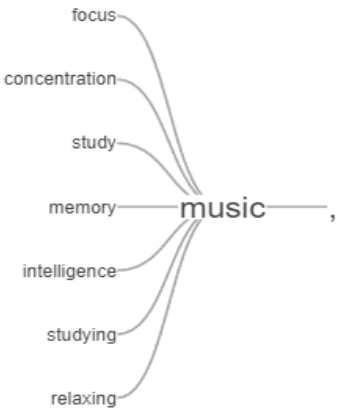

Figure 3
WordsTree Results (Voyant Tools)

'Music' is the most often frequent word in the Tags 50 Videos. In Wordstree (figure 3) it can be seen that 'Music' is a center word for another words, namely, 'focus', 'concentration', 'study', 'memory', 'intelligence', 'studying', and 'relaxing'. In figure 4, it is known that the word 'Music' is frequently mentioned in ten segments, then 'concentration, 'focus', 'meditation', 'classical', and 'power' follow. In the four words, there are many mentions, so based on the displayed trend, the four words always intersect. On figure 2, figure 3 and figure 4, the author used data visualisation to illustrate frequent words appears in this text mining process.

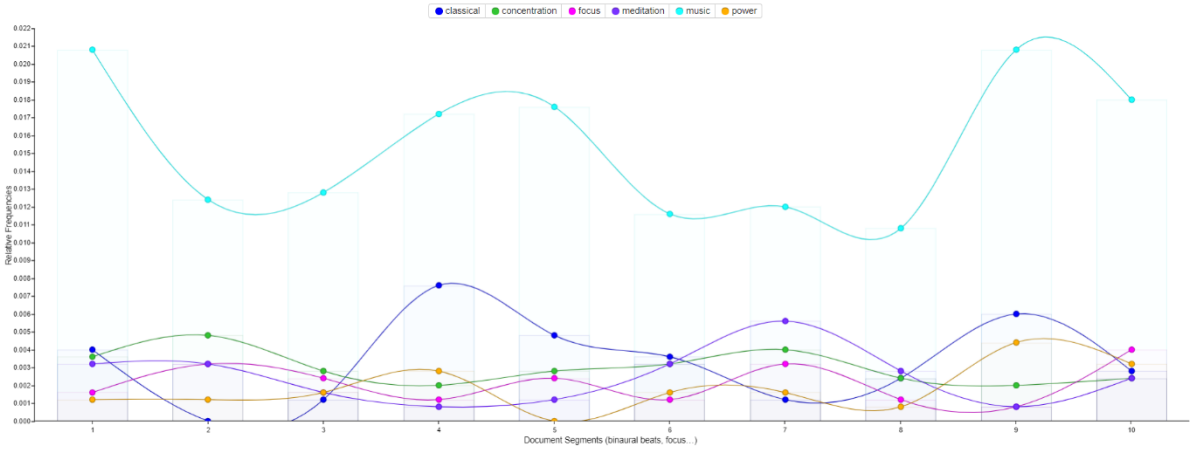

Figure 5 Trends Analytics

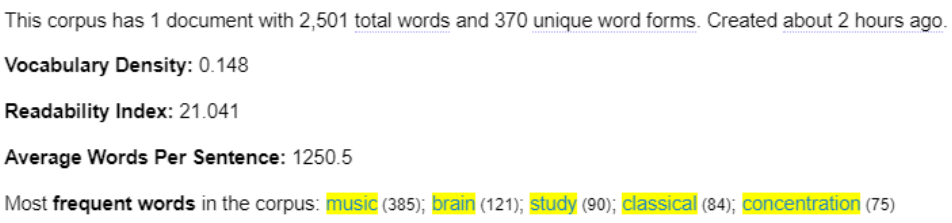

Figure 6 Summary Analytics

	Term	Count	Trend
1	music	385	
2	brain	121	
3	study	90	
4	classical	84	
5	concentration	75	
6	binaural	63	
7	meditation	62	
8	focus	53	
9	mozart	48	
10	power	46	
11	memory	44	
12	beats	43	
13	studying	39	
14	waves	38	
15	sleep	33	
16	relaxing	29	
17	intelligence	27	
18	better	23	
19	reading	22	
20	improve	21	
21	stress	21	

Figure 7 CorpusTerm Analytics

Based on figure 5 and figure 6, the writer gets quantitative data about the 50 YouTube video tags. In figure 5, it is known that the number of words reached 2501 with 370 unique words. Then, the word 'music' was mentioned 385 times which made it the most. Then followed by the word 'brain' with 121, the word 'study' reaching '90', the word 'classical' reaching 84 words and 'concentration' reaching 75 words. In figure 6, the words have been identified with count amount. Based on figure 6, as we can see, ‘Music’ became the most tags word 385 times. CorpusTerm expands the frequent word as a summary tool, yet CorpusTerms has more details in word counts.

4. DISCUSSION

Based on the data obtained, it shows that several times the Tag is repeated. A recurring example is 'Music', which reaches 385 words. According to the author, there could be two possibilities. Namely, the Taggers did not make single words but plural words such as 'Study Music' and 'Concentration Music', so that in single video, the word 'Music' was detected up to 2-5 times.

Because Tags are done not using controlled vocabulary rules, as Smith (2008) stated that folksonomies are independent, not merely with the subject heading to determine their tag, so many words are repeated. They have words that have the same meaning. It is known from the analytical results of CorpusTerm that the words 'Study', 'Studying', 'Concentration', 'Focus', 'Meditation', 'Relax', 'Sleep' and others are indicated as homonyms and related to the ‘Brain Music’ but are tags as separate context words. For example terms ‘Cognitive’, ‘Sensorics’ is related to the human brain (Särkämö, 2018), nevertheless taggers, keep tags the word multiple times.

This proves hat Folksonomies is a social collaboration based on the perspective of people seeing things. No rules limit their perception because folksonomies have no rules that limit the

vocabulary they mark. The perception of people who mark on the video is related to how someone is psychology when listening to music and perceiving what this music is for (Dobson, 2019; Hsu & Chen, 2020; Liu et al., 2021), such as examples of learning, therapy (Sharma, 2022), relaxation and sleep.

5. CONCLUSION

Folksonomies is a collaborative forum where people can write tags about themselves or their groups. Folksonomies become an alternative for retrieving information in a group of people, rather than a difficult and standard language with controlled vocabulary. As a result, folksonomies make it easier for individuals or groups to find content based on common words and group experiences.

Folksonomies also have the disadvantage that they have the same meaning, yet they are written in a double way so that in the analytical process, there are multiple results, as in this paper. However, this does not mean that folksonomies cannot be used within the scope of information management studies; collaboration between Folksonomies and Taxonomies is inevitable in the future to improve the user experience of content, admirers of a group (fanbase) or library patrons.

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