

# A genre analysis of TED talks of educational theme

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**Abstract:** This paper is an attempt to illustrate that the TED talks are not only belong to speech register, but also be combined with conversation register and written register. The methodology is proceeded in comparison with other register through representative texts and general data to examine whether the selected TED talks of educational theme have the mix of written register and conversation register. It will finally lead to a conclusion to an analyze to what extent do the TED talks can be regarded as a conversation register or written register. This shall help to better understand the special characteristics of TED talks.

**Keywords:** TED talks, educational presentation, linguistic, register research

## 1. Introduction

The TED (Technology, Education, Design) talks are speeches for knowledge dissemination around multiple topics which focus on “spreading worthy ideas” to non-expert audiences. In the beginning of TED talks, the record and dissemination were limited at a small range due to finite recourse and transportation. Now, which is the days after 2006, it takes the advantages of network by delivering its ideas through online platform. The diversity and unique speech forms of the TED talks have already become a popular resource for spreading knowledge in promoting education, science, environment protecting, technology etc.

As a special category of speech leading a new generation, the TED talks differ the common speeches in not only the content but also the article structure. On the other word, a speech of TED talks includes more than one registers combining both educative part and science popularization part into a speech (Caliendo 2014:101). It drives the TED talks from normal speeches into a kind of communication with global audience which makes it uncommon.

This paper attempt to claim out these special features of TED talks through a sub-topic of them based on the register analysis method adapted from Biber’s book named as Register, Genre and Style. Due to the limitation of amount and to avoid unevidential, this paper will focus on one sub-topic of TED talks from mainly 3 videos which are all education topic uploaded by recent 10 years, and all speeches are conveyed by male speakers. They are Bring on learning revolution, 3 ways to lower the barriers to higher education and How to escape education’s Death Valley. There may also be some parts of other TED speeches to be evidence for some general properties of TED talks.

## 2. Methodology

The three selected videos belong to just a sub-topic that cannot represent all TED talks. Hence, this paper will pay more attention to analyze the texts themselves through the definition of linguistic features and generally talk about the differences among TED talks, conversation register and written register.

### 2.1 Comparing with conversation register and written register in aspect of situational characteristics

As the talks used for analysis are selected from educational theme, which is only a sub-topic of TED talks, some situational characteristics from their data cannot presents the whole features of TED talks. Therefore, the following situational characteristics exhibited for comparison includes only those characteristics that are representative enough. These chosen points may not be affected by the theme, instead, they are the general characteristics of TED talks. To distinguish the register more specifically, the analysis chooses some real topic of register for the comparison. The sample types for comparing conversation register are face-to-face conversation and formal meeting; the sample types for comparing written register are news report and academic writing. The data also supplies the characteristics of formal (prepared) speech by contrast with TED talks.

The samples mostly come from another book of Biber which named as Grammar of spoken register and written register.

#### 2.1.1. Participants

**Table 1: Characteristics of Participants across registers and selected videos**

	Addressor	Addressees	Onlooker
TED talks(education)	specific person	listeners (great amount)	Yes

Face-to-face	specific person	individual	No
Meeting(company)	specific person	listeners	Yes
Formal(prepared) speech	specific person(famous)	listeners(great amount)	Yes
News report	not included when reading	readers	No
Academic writing	not included when reading	readers	No

A common conversation register such as a face-to-face conversation is held between individuals and may represent on any occasions. There are mostly no onlookers because all participants will be involved into the communication or form another face-to-face conversation with other attender.

The formal meetings have onlookers including listeners and some of them may communicate with addressor frequently. Liking formal speeches, TED talks proceed with a great number of listeners and onlookers. The difference is that a part of them is in the presence of speech room while another part of them coming from network while the formal speech mainly presents for live audiences.

In the aspect of participants, there are such vast differences between conversation register (including TED talks) and written register. Due to the broadcast medium, either addressor or addressee in news report and academic writing are not obvious. Though the readers reach a high amount, their direct effect to addressor is very poor and can not be counted as onlookers.

#### 2.1.2. Relations among participants

**Table 2 Relations among participants**

	Social roles	Personal relationship
TED talks(education)	equal	strangers
Face-to-face	depending on occasions	mutiple possibilties
Meeting(company)	equal or power different	colleagues or leader-member
Formal(prepared) speech	equal or power different	strangers
News report	equal(not mentioned in text)	strangers
Academic writing	equal(not mentioned in text)	strangers

The social roles of conversation register especially a face-to-face one is very flexible which shall depend on the occasions. It can probably happen in everywhere the addressor and addressee are engaged and their relationship remain multiple possibilities. The meeting occurs more regular than face-to-face conversation. The connection between speaker and listeners is mostly work, and they are colleagues or leader-member. At least, participants recognize each other in both of these two situations.

The roles in a formal speech are sometimes equal because it is used for advertisement or to show the statement; it could also be power different because its function is about encouraging stuffs or citizens. The listeners mostly can recognize the speaker while it is not the same in opposite aspect.

The relation among participants in TED talks seems not important and their status are equal. The participants come from everywhere and there are no polite words which is redress for imposition in the three chosen videos. The addressor and addressees are equal and strangers.

In the academic writing and news report relate, participants relate very little with each other. Neither author nor readers will have contact with each other when reading the texts.

#### 2.1.3. Communicative purpose

The sub-topics of TED talks exist as a great quantity while the selected videos are about one sub-topic. Therefore, the following analysis of the communicative purpose of the TED talks represent only a subset in educational theme.

2.1.3.1. General purpose

**Table 3: Common general purpose across registers and selected videos**

	General purpose
TED talks(education)	Exlanatory and description
Face-to-face	Most description or directive
Meeting	Directive words for settling the aim
Formal(prepared) speech	Narration and directive
News report	Narrative
Academic writing	Explanatory and argumentation

In a conversation, directive occupies an crucial place because the addressor needs to deliver an order through communication or short text. People express their personal feelings mostly by face-to-face conversation in description mode. News report is special in written register because it should directly narrate the information and an academic writing is explanatory for interpreting the ideas with arguments of expert attitudes. TED talks in educational theme are mixed which can be divided into two parts.

2.1.3.2. How the registers shifting purpose

As every part of a text may carry a different purpose. Meanwhile, a conversation shifts purpose quickly because of simpleness and an academic prove switches purpose slowly due to long structure. This section may also try to analyze shifting frequency when they are talking or writing.

**Table 4: In which way the registers shift communicative purpose and selected videos**

	Shifting method
TED talks(education)	Shifting flexibly,no certain mark when shifting
Face-to-face	Flexible,frequently shifting purposes
Meeting	Purposes shift with proceeding of sections
Formal(prepared) speech	Shifting with the structure of text (simple form)
News report	Mainly narrationd interpration
Academic writing	Shifting with the structure of text

The face-to-face conversation always shifts communicative purposes in a very flexible way because the ideas of both participants switching with the variation of situation and the influence of words from listeners.

Due to the characteristics of meeting and report, their purpose shifting method are somehow fixed. A proper meeting shall proceed in a certain process, and a report mainly works for interpreting information.

The communicative purpose of an academic writing is usually varying with sections because a perfect argument needs to finish with sophisticated structure. Biber (2019, p.45-46) claims that a typical scientific research article can be composed into four sections and each of them carries a function which expressing different purpose and reflecting a distinct sub-register.

One of principles of the TED talks try to persuade speakers to not read the talks causing a result that texts from TED talks are not scripted leading to a way that is talking flexibly. All the three selected videos are begun with a narration about speakers themselves leading to the moral thinking by personal story:

My father grew up in the Deep South in the ...

(3 ways to lower the barriers to higher education)

I moved to America 12 years ago with my wife ...

(How to escape education Death Valley)

I was here four years ago and I remember the time the talks ...

(Bring on learning revolution)

The speech may secondly deliver a more general description to summarize the recent information which means to expand the range of what they referred to and begin an interpretation about the situations of the whole United States or the whole world to shows the information from multiple sources:

In the United States, a four-year bachelor's degree can cost ...

Based on the narration, speaker will then interpret idea with directive words like "we need" "we have to":

And if we are going to do that, we have to dramatically ...

We have to rethink time ...

And in the rest part of the speech, narration of personal experience and interpretation about evidential information has been set into a persuasion telling solving methods for at least 4 times with support of some directive words. Through the videos, in every 3 mins, there is a description or an interpretation to supply examples combing with persuasion conveyed by problem solving methods. It exhibits a phenomenon that the frequency in switching specific communicative purposes in TED talks is higher than formal speech, but not strong as communications.

#### 2.1.4. Processing circumstance

**Table 5: The circumstance of production across registers and selected videos**

	Production
TED talks(education)	Planed (try not to read when presenting)
Face-to-face	Not be planed
Meeting	Planed (not all)
Formal(prepared) speech	Planed or scripted
News report	Planed and edited
Academic writing	Planed and edited

Normal face-to-face conversation happens when participants are encountered with each other and words shall depend on reactions. TED talks are planned but not encouraged to be scripted by TED conference which is in contract with formal speech. All written texts are edited.

#### 2.2 Comparing with conversation register and written register in aspect of linguistic features

The aim of identifying linguistic features of TED talks is to find the particular characteristic as a mix-register. By comparing with data of samples from conversation register and written register, the expected finding is that the frequency in using certain linguistic features is high enough to reach a level of conversation register while the other part of a TED talk may represent like written register or something else, which is an illustration of hybrid of registers and evidence that the TED talks are not stable to be only a speech register.

##### 2.2.1 Vocabulary

The vocabulary is a fundamental feature of texts which will be used for entifying the frequency or quantity of the presence of word classes. Both representative samples and authorized data will be involved in this section to improve the comparison of registers.

##### 2.2.1.1 Using of colloquial verbs

Due to the convince and simple structure of colloquial language, the multi-function verbs such as "make", "take" paly an essential role in conversations. In contract, to ensure the currency and avoid ambiguity, the multi-function words are replaced by more formal and specific words in written text except the communications in a fiction. From the first 10 mins from selected TED talks and a sample of academic writing(appendix 2), this section picks some typical commonly used verbs, the frequency below 2 times will not be counted:

**Table 6: Some representative colloquial verbs in selected videos**

	go/going	take	know	make	have
Bring on learning revolution	8	8	12	2	9

3 ways to lower the barriers to higher education	3	8	3	3	7
How to escape education`s Death Valley	N/A	N/A	5	2	7
Academic writing	N/A	N/A	N/A	N/A	N/A

Through the data, the amount of colloquial verbs in 3 selected are mostly no more than 10 (the part of have do not include the usage of perfect tense). And the academic writing even not contain more than 2 times of multi-function words. But the presence of these words is not average in each paragraph, instead, they appear under smore particular circumstance that colloquial words are frequent in a short time like:

It`s one of those cultural myths, like, “The British are reserved.”

I don`t know why people think this.

You know, so when you leave living rooms in Europe, people say, thankfully, nobody was ironic in your presence.

Because whoever thought of that title gets irony.

(From How to escape education`s Death Valley)

My daughter never wears a watch. My daughter Kate, who`s twenty. She doesn`t see the point. You know, as she says, no. Like it`s a single function device, you know, like.

Like, how lame is that, you know? And I said, no, no, it tells the date as well. You know, it`s.

(From Bring on learning revolution)

### 2.2.1.2 The density of lexical words

As the texts of written register are planned and edited, the paragraphs of these texts contain more information rather than conversations that are produced by addressor in real-time. The characteristics of TED talks reveal that they are planned without further script and edit. Here is a diagram of lexical density of lexical words:

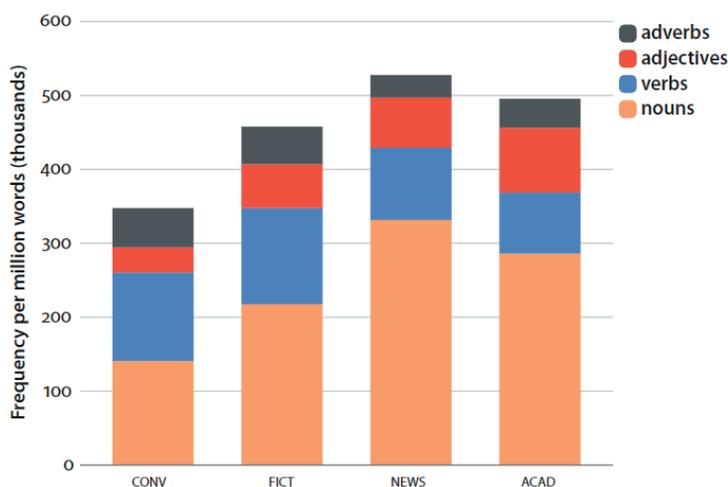


Figure1: Distribution of lexical words classes across register

(Adapted from Biber, 2021, Grammar of Spoken and Written English p.68)

It could be seen that a conversation may only include 35 percent of lexical words while around 45% of words in fictions, 53% of words in news reports and 49% words in academic writings are lexical words.

Table 7: Number of lexical words in selected videos and their percentage

	lexical words / totals counted words	Percentage
Bring on learning revolution	916/2000	45.8%
3 ways to lower the barriers to higher education	712/1600	44.5%
How to escape education`s Death Valley	896/2000	44.8%

Through the calculation, the proportions of lexical words in selected videos are nearly 45%.

### 2.2.2 Distribution of prepositions and pronouns (functional words)

The using of function words is quite different among registers especially the appearance of preposition and pronouns because of the characteristics of them. A written text is required to notice the logical connection of a lot of nouns and links between words which means a higher frequency of using prepositions.

In TED talks, there are two situations when using prepositions or pronouns. The pronouns do not appear frequently and averagely in every part of the speech, instead, they concentrate in a few closed sentences:

So let me ask you something you may take for granted. How many of you here are over the edge of 25? That's not what I think you take for granted. I'm sure you're familiar with that already, but. How many people here under the age of 25? Those over 25, could you put your hands up if you're wearing a wrist watch?

(From Bring on learning revolution)

I wanna see a student regardless of where they are, regardless of their location, to have a single source be in their mobile phone or their laptop where they have access to instruction in real time or in their time.

(From 3 ways to lower the barrier to higher education)

The number of prepositions is a little different with the condition of pronouns, they concentrate in few mins while the rest of them distribute in the whole speech:

There's wonderful work happening in this country. But I have to say it's happening in spite of the dominant culture of education, not because of it.

It's like people are sailing into a headwind all the time.

The reason I think is this that many of the current policies are based on mechanistic conceptions of education.

(How to escape education's Death Valley)

**Table 8: Number of using representative preposition and pronoun in each part**

How to escape education's Death Valley	Number of "you/your"	Number of "of"	Number of "in"	Number of "to"
First 500 words	15	16	6	11
500~1000	2	18	7	14
1000~1500	11	16	16	22
1500~2000	7	11	9	14
2000~2500	4	15	8	10
Bring on learning revolution	Number of "you/your"	Number of "of"	Number of "in"	Number of "to"
First 500 words	10	12	2	5
500~1000	7	11	9	15
1000~1500	28	10	5	17
1500~2000	8	11	8	10
2000~2500	19	11	10	20

### 2.2.3 Suffixes

The derived noun which mainly produced by suffixes is an essential feature of written register because it makes issues into concepts. It removes the dynamicity of matters and the consequence is an abstract idea. In conversations, it is rare to observe too many derived nouns unless a conversation is proceeded under expert conditions.

However, the abstract concepts seem more usual in written register and many derived nouns are included in few sentences except some kinds of fictions that focus on interactivities of participants.

**Table 9: Number of derived nouns in selected videos (-tion and -ity for example)**

	-tion/	-ity/	Concentration	Total words
Bring on learning revolution	32	13	Concentrate in 5 sentences	2634
3 ways to lower the barriers to higher education	35	15	Appear frequently 11 sentences, no concentration	1637
How to escape education's Death Valley	50	24	Concentrate in 6 sentences	2522

The total number of derived nouns in selected videos are not too many and it is somehow less than expected, but they are concentratedly used in a few closed sentences.

#### 2.2.4 Clause

##### 2.2.4.1 Clause structure

The clause structure in conversation register is often simpler than what it is in written register. The compound sentences in conversations mostly contain 2 clauses while a written text may include complex sentences with 3 or more clauses .

**Table 10: clause structures in selected videos (first 1k words)**

	Single-clause	Two-clause	Three-clause	Four-clause	Total sentences
3 ways to lower the barriers to higher education	40	30	8	0	59
How to escape education's Death Valley	54	28	9	1	78

For some reasons, the clauses in selected videos are not too complicated, instead, the structure is quite simple for understanding. Most of them are single-clause structure or two-clause structure.

##### 2.2.4.2 Relative clause

The relative clause is an essential feature in explaining concepts reflecting the proportion of explanatory which is used to extend the length of idea and supply further information. That is crucial to contain more information in certain texts such as academic writing or news report and exist in nearly every sentence:

In these cases, the TED talk is presented as an issue of common concern or interest, relevant to both the speaker's and the audience's daily life. This establishes a contact with the audience, which promotes a sense of similarity with the speaker; in other words, the audience perceives the speaker as someone who is 'just like them'. This is mainly conveyed through the use of the inclusive pronouns 'us' and 'we', which create a sense of unity in the group, breaching the usual speaker/audience barrier, as in 'we all know about'.

**Table 11: Relative clauses in selected videos**

	which-	who-	where-	that-	Frequency
Bring on learning revolution	7	10	5	15	0.19 per sentence
3 ways to lower the barriers to higher education	0	1	3	17	0.21 per sentence
How to escape education's Death Valley	9	12	1	15	0.20 per sentence

### 3. Findings

According to the data about conversation register, written register and the selected TED talk videos that has been listed above, the consequence can be clearly calculated through comparison and main findings will be showed in following section.

#### 3.1 Participants and Interactions

The participants in TED talks are mostly dimmed in the speech. The TED talks in educational theme only present few interactivities when a speech is going on and there is no power influence towards the addressor as the speakers and listeners are strangers to each side. Though the speeches are delivered by a specific person, the attraction is idea itself while the speakers do little effect in this process. What's more, viewers from internet who do not feel interaction with audience are the major contribution to the onlookers. It means these characteristics are similar to written register which is "the writer is not clearly mentioned in text" and "less reaction from addressees". However, this cannot prove that the written register is included as a part of TED talks because the audiences and speakers are really facing with each other which

should not be ignored.

### 3.2 Communicative purpose

The communicative purpose of TED talks is a mixed system and it seems not belong to neither register, but it tends to be more like a conversation because the texts of selected videos represent more on description rather than explanatory. Because the data in present-tense and past-tense exhibits that the amount of verbs in present-tense in TED talks is massive that is equivalent with the degree of conversation. A high proportion of present-tense verbs means a text that focus on the description and narration of issues in current time and place while the audience know what time the speaker referred to. The selected TED talks and conversation register have a high degree of similarity in tense of verbs and their data are basically the same which are both 10% of verbs in present-tense reflecting that TED talks may has the characteristic of description like conversation register.

The TED talks are also expected to have the characteristic of explanatory due to the principle of spreading idea. Indeed, their explanatory part only occupies a small territory of the whole speech which is conveyed after descriptions. As a key element in explanatory part, the relative clauses are included only a small amount in selected TED talks even though the concentrations of relative clauses. Their proportion is significantly low that cannot reach the level of written register.

Hence, it is probable to say that the description in TED talks is also a part of conversation register.

### 3.3 Shifting Communicative purpose

Each section in a whole text contains each specific purpose and its flexibility differs. As the illustration above, the switching of purpose of TED talks is fluent but it is still not in a high level as a conversation. Therefore, it is hard to say the performance in shifting communicative purpose of TED talks is a characteristic like conversation, they are just similar.

### 3.4 Vocabulary

The lexical words in TED talks comparing with their total words have a high proportion which is relevant that its density of lexical words can nearly reach the level of 44%. Comparing with other registers, the density of lexical words in conversations is about 33% while the written registers all reach a degree of at least 45%. The lexical density of TED talks is insufficient to be counted as academic writing but they nearly reach a degree as fictions and the percentage is much higher than what conversations are. It means that TED talks are informative as a written register.

The relevance of vocabulary is not covered by only one characteristic. Some parts of TED talks are different from this general tendency that is similar to written register. When the speaker is asking or describing something, the using of pronouns will be brought into an extreme increase especially the word "you". In descriptions or interactivity with audience where the concentrations of pronouns, the number of "you", for example, can reach a frequency as equivalent as a conversation and

Unfortunately, though preposition plays an essential role in analyzing text, the prepositions in TED talks seem independent and no similarity with neither kind of register. Its number of prepositions is higher than conversations but lower than normal written register. Consequently, this linguistic feature is not available for distinction of register of TED talks.

In other words, it can be seen that the vocabulary of TED talks represents a general characteristic that is information as written register. And there are also some situations that TED talks reflect their side as a conversation register which means they are somehow mixed-register.

### 3.5 Derived noun

Derived noun is a feature that frequently used in written register except fictions while rare in conversation register. In the aspect of this linguistic feature, a general proportion of derived noun in TED talks is very low. Only when there is an explanation about ideas or concepts, the derived nouns are used in large numbers in a range of four to five sentences which is the concentrations of all derived nouns in the whole speech. Under this circumstance, the frequency of using derived noun is enough to be a representation of written register for about 2~3 derived nouns per sentence.

### 3.6 Clause structure

The clause structure is a reflection of complexity of sentences and the sophisticated sentence is a common element in news report and academic writings. The clause structures in written register are filled with long sentences with three-clause units or four-clause units. From the data analysis, using of complicated clause structure is rare in the selected TED talks as the combination of their sentences are mainly single-clause units and two-clause units. This characteristic is the same with conversation register that are filled with short sentences for easier understanding rather than academic writings.

## 4. Conclusion

In a general aspect, the selected TED talks can only be counted as a written register when referring to their density of lexical words because they are informative enough. In other aspects, they can be regarded as written register only in a small range of sentences. The data of selected TED talks shows a phenomenon that these speeches have a high degree of similarity to conversations and can be seen as a representation of conversation register in many aspects. Overall, it gives a consequence that the TED talks in educational theme reveal as a hybrid of conversation register and limited written register.

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