



# A Study of English Teaching Model in Medical Universities Based on NOW Corpus

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**Abstract.** This paper introduces the features and functions of NOW Corpus, analyzes the present situation and problems of medical college English teaching, discusses the possibility and methods of using NOW Corpus in medical college English teaching, and puts forward some suggestions and prospects.

**Keywords:** Now Corpus · Medical Universities · English Teaching

## 1 Introduction

English education is an essential part of China's higher education system. The value and function of English education are self-evident. Medical college English teaching model tries to use a variety of material designs and modal resources, such as images, sounds, actions, languages, and so on, in order to improve teaching and learning effectiveness. The humanistic spirit should be fully reflected in teaching in this case, and it should also be communicated to students via evaluation. Textbooks compiled according to curriculum standards strive to meet the requirements of the curriculum in terms of teaching content, structure, arrangement, design of texts, exercises, and activities in order to cultivate students' learning abilities. The evaluation system must also ensure that this objective is met. As a result, evaluating the practical teaching quality at universities is an effective way to ensure that universities can significantly improve their teaching quality [1].

However, despite the fact that the reform of college English teaching has yielded mixed results, medical colleges have yet to achieve a breakthrough. The traditional medical college English teaching model still has some problems, such as outdated teaching materials, lack of authenticity and diversity of language input, insufficient attention to students' professional needs and interests, and low efficiency and quality of teaching and learning. Therefore, it is necessary to explore new ways and methods to improve medical college English teaching.

The purpose of this paper is to explore the relationship between NOW Corpus and English teaching in medical colleges and universities in order to provide some reference and enlightenment for improving the quality and effectiveness of English teaching in medical colleges and universities. This paper first introduces the features and functions of NOW Corpus, then analyzes the current situation and problems of medical college English teaching, then discusses the possibility and methods of using NOW Corpus in medical college English teaching, and finally puts forward some suggestions and prospects.

## **2 Features and Functions of NOW Corpus**

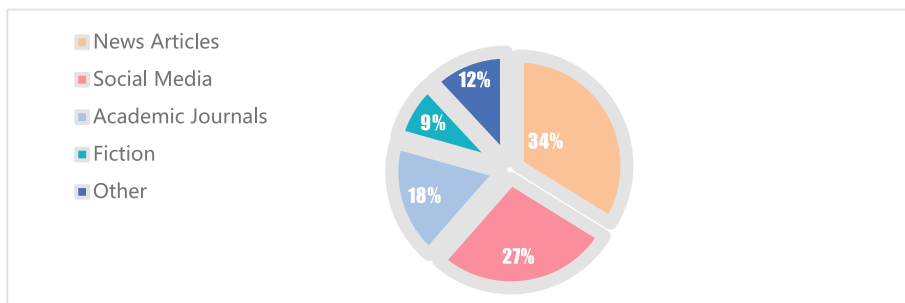
NOW Corpus is a large corpus of online news from 2010 to the present. It contains data from English online newspapers and magazines in more than 20 countries and regions. At present, there are 17.2 billion words of data, and it is still growing at the rate of about 200 million words every month. Now Corpus is a dynamic, time-sensitive, diverse, and searchable English corpus, which can provide abundant materials and evidence for English teaching and research. This section will introduce the four main features of NOW Corpus: dynamic, timeliness, diversity, and retrievability [2].

### **2.1 Dynamic Property**

Dynamic means that the NOW Corpus is constantly updated. Timeliness means that the NOW Corpus reflects the latest English usage and social phenomena. The NOW Corpus is a collection of online news from 2010 to the present, which can show the changes and developments of the English language, such as new words, new usage, new styles, etc. NOW Corpus can also show the hot topics and concerns of English society, such as politics, economy, science and technology, education, culture, and other fields of the latest information and views.

### **2.2 Timeliness**

The timeliness of the NOW Corpus means that it can reflect the latest changes and trends in language, as it adds a large number of news and magazine texts every month, covering multiple countries and regions. Its latest data is updated every day, so it can better reflect the dynamic and diversity of language than some static Corpus [3].



**Fig. 1.** Distribution of genres in NOW Corpus

### 2.3 Diversity

NOW Corpus covers a wide variety of English texts. NOW Corpus contains data from English online newspapers and magazines from more than 20 countries and regions [4]. It can show the regional differences and cultural diversity of English, such as American English, British English, Australian English, Indian English, and other different varieties of English, as well as the cultural background and values of different countries and regions [5]. NOW Corpus also contains different types and styles of English texts, such as news reports, commentary articles, feature reports, columns, interview programs, etc., as shown in Fig. 1. It can show the functional differences and stylistic diversity of English, such as objective description, subjective evaluation, argumentation and analysis, storytelling, dialogue, and communication, etc.

### 2.4 Retrievability

NOW Corpus provides powerful retrieval functions and tools. NOW Corpus can be accessed and retrieved through web pages or clients [6]. It provides a variety of retrieval options and conditions, such as words, phrases, sentences, parts of speech, punctuation, and so on. NOW Corpus also provides a variety of display methods and analysis tools for retrieval results, such as lists, charts, statistical data, and so on. Through the retrieval functions and tools of NOW Corpus, users can quickly find the English materials and information they are interested in or need and conduct in-depth analysis and research.

Using Python language, this paper searches nltk library, and write a simple program to achieve the NOW Corpus retrieval and analysis:

```

# Enter nltk library import nltk
# download the NOW Corpus provided by nltk
nltk.download('now')
# loading NOW Corpus from nltk.Corpora import now
# define a function to retrieve and analyze the NOW Corpus def search_and_analyze(key-
word):
# retrieve sentences containing keywords
sentences = now.sents(words=[keyword])
# print the number of sentences retrieved
print(f'Found {len(sentences)} sentences containing {keyword}.')
# print the first 10 sentences
print('The first 10 sentences are:')
for sentence in sentences[:10]:
    print(' ',join(sentence))
# analyze the part-of-speech distribution of keywords
tags = [tag for word, tag in now.tagged_words() if word == keyword]
# print speech distribution
print(f'The part-of-speech distribution of {keyword} is:')
for tag, count in nltk.FreqDist(tags).most_common():
    print(f'{tag}: {count}')
# analyze the collocation of keywords
collocations = nltk.collocations.BigramCollocationFinder.from_words(now.words())
# print the first 10 matches
print(f'The top 10 collocations of {keyword} are:')
for bigram, score in collocations.score_ngrams(nltk.collocations.BigramAssoc-
Measures().pmi)[:10]:
    if keyword in bigram:
        print(bigram)
# call a function, for example 'coronavirus'
search_and_analyze('coronavirus')

```

### 3 NOW Corpus and Its Application in Medical Universities

As a rich and real-time English data resource, NOW Corpus provides many possibilities and conveniences for college English teaching. One of the main uses of NOW Corpus in teaching English is to teach language knowledge. Corpus can be used to teach vocabulary, grammar, and other aspects of language knowledge relevant to medical students [7]. Table 1 shows the frequency of medical terms in the NOW corpus. For example, corpora can be used to teach medical terminology, idioms, and technical language used in medical research and literature.

**Table 1.** Medical terminology in NOW Corpus

Medical terminology	Frequency counting
Clinical trial	17567
Medical research	13782
Public health	8493
Cancer	7925
Immunization	5678

This paper discusses how to use NOW Corpus in college English teaching, including vocabulary teaching, reading teaching, writing teaching, cross-cultural communication teaching, and so on.

### 3.1 Vocabulary Teaching

Vocabulary is the basis and core of English learning. Mastering rich and accurate vocabulary is the key to improving English proficiency. However, traditional vocabulary teaching is often lack of authenticity and timeliness, and can not reflect the latest English usage and changes. Using NOW Corpus, teachers and students can get the words in the latest Internet news and understand their meanings and usages by looking at their context, frequency, collocation, and so on [8].

#### 3.1.1 Frequency and Trend of Query Words

NOW Corpus can show the frequency distribution and trend change of words in different time periods, different countries, and different topics. This can help us understand the popularity and importance of words, as well as the characteristics of the era and geographical characteristics of words. For example, we can query the frequency and trend of the word “coronavirus” over the past 14 years, as shown in Fig. 2. Figure 2 shows the change in the frequency of the word “coronavirus” between 2010 and 2023. As we can see, the word “coronavirus” has exploded in 2020, reflecting the global impact of the new epidemic [9].

#### 3.1.2 The Collocation and Deformation of Words

NOW Corpus shows how words are collocated with other words or phrases, and how words are inflected in different sentence structures. This can help us understand the semantic and grammatical features of words and how they are expressed in different contexts. For example, we can query the word “vaccine” for collocations with other words or phrases, as shown in Fig. 3. Figure 3 shows how often the word “vaccine” is used with other nouns, adjectives, verbs, prepositions, and so on. We can see that the word vaccine is often used with nouns such as covid-19, development, and efficacy; adjectives such as safe, effective, potential, and experimental; verbs such as develop, administer, distribute, and approve; and prepositions such as for, against, with, and without. These



Fig. 2. “Coronavirus” frequency from 2010 to 2023

CD	★	ALL FORMS (SAMPLE): 100 200 500	FREQ
①	★	VACCINE	1770180
①	★	ANTI-VACCINE	13005
①	★	PRO-VACCINE	1223
①	★	POST-VACCINE	1091
①	★	PRE-VACCINE	494
①	★	IMMUNOVACCINE	341
①	★	COVID-VACCINE	223
①	★	ANTIVACCINE	214
①	★	COVID-19VACCINE	205
①	★	PROOF-OF-VACCINE	154
①	★	NON-VACCINE	148
①	★	#VACCINE	118
①	★	PREVACCINE	100
①	★	CORONAVIRUS-VACCINE	99
①	★	ADVACCINE	88
①	★	THEVACCINE	87
①	★	#COVIDVACCINE	80
①	★	CORONAVIRUSVACCINE	74
①	★	#COVID19VACCINE	68
①	★	NONVACCINE	49
①	★	NANOVACCINE	48
①	★	7-VACCINE	47
①	★	BIO-VACCINE	47
①	★	DRUG/VACCINE	43
①	★	DAILY VACCINE	41

Fig. 3. How the word “vaccine” is used with other words or phrases

collocations reflect the common usage and meaning of the word “vaccine” in the medical field.

### 3.1.3 Synonyms and Antonyms of Words

The NOW Corpus shows the degree to which a word is related to other words or phrases with the same or opposite meaning, and how these associations change over time, in different countries, and on different topics. This can help us understand the semantic range and variation of words, as well as the choice and substitution of words in different contexts.

## 3.2 Reading Teaching

Reading is one of the most important and difficult skills in English learning. It requires a lot of vocabulary, sentence patterns, logic, background knowledge, and so on. Traditional reading teaching is often lack of diversity and interest, and can not stimulate students’ interest and motivation in reading. Using NOW Corpus, teachers and students can get the latest online news articles, and select the content that is interesting and suitable for their level to read by looking at their titles, sources, dates, and other information [10].

Teachers can use the keyword function provided in NOW Corpus to view the words used more or less frequently in a country or region than in other countries or regions and analyze these words in combination with specific articles to reflect the unique cultural, social, political, and other aspects of the country or region. For example, the top 10 words used more often in the United States than in other English-speaking countries are: Trump, Biden, impeachment, senate, democrats, republicans, vaccine, stimulus, election, and covid-19, all of which are related to major events in the United States in 2020. Teachers can use the concord function provided in NOW Corpus to check the collocation and change of a word or phrase in different times, different countries or regions, different sources, etc., and analyze what kind of language rules and social phenomena these collocations and changes reflect in combination with specific articles.

### 3.3 Writing Teaching

Writing is one of the most practical and challenging skills in English learning. It requires the use of multi-lingual knowledge and skills to express one's thoughts and opinions. The traditional teaching of writing is often lack of guidance and reference, and can not give students enough support and feedback. Using NOW Corpus, teachers and students can get the latest news articles on the Internet, and imitate or learn from their writing methods and techniques by looking at their structure, content, style, and other information. Teachers can use the wordlist function provided in NOW Corpus to view the words with the highest or lowest frequency in a certain period of time and guide students on how to choose appropriate and effective words to express their views in combination with specific articles.

Teachers can use the concord function provided in NOW Corpus to view the collocation and change of a word or phrase in different times, different countries or regions, different sources, etc., and guide students on how to choose appropriate and powerful words and phrases to support their arguments according to different topics and situations. For example, the teacher in Fig. 4 may select the phrase "mental health" as a writing guide and select articles related to the phrase from the NOW corpus as writing examples.

The screenshot shows the NOW Corpus interface with a search for 'mental health'. The results are displayed in a table with columns for rank, date, source, and a snippet of the article text. The interface includes a search bar, navigation tabs (SEARCH, FREQUENCY, CONTEXT, ACCOUNT), and various utility icons like HELP, SAVE, TRANSLATE, and ANALYZE.

SEARCH	FREQUENCY	CONTEXT	ACCOUNT
(SHUFFLE)			
CLICK FOR MORE CONTEXT			
1	23-02-19 IN	ahmedabadmirror.indiatimes.com	In Gujarat using the Patient Health Questionnaire-4 (PHQ-4) screening tool to assess their <b>mental health</b> status. # During the project duration, host online mental health sessions. # A CHARITY is hosting an online event aimed at <b>mental health</b> after a cancer diagnosis. # Online Mindful-
2	23-03-05 CA	jamaica.gleaner.com	a beauty to behold, the director of communications and public awareness for the Jamaica <b>Mental Health</b> Advocacy Network is in the process c
4	23-04-02 CA	brilliantmatter.com	Michael's products, her mental health advocacy work, and further cultivate a supportive <b>mental health</b> community. # " The event is a platform
5	23-02-16 US	bostonlobe.com	" # It's not a bad thing that people want to deal with their <b>mental health</b> , Rosmarin said, just as it's healthy to get such things as
6	23-03-02 US	pediatrics.aappublications.org	al Brief of Amici Curiae Academy of Pediatrics and additional national and state medical and <b>mental health</b> organizations in support of plaintiff
7	23-03-19 US	washingtonpost.com	disastrous," the filing asserts, saying more children than ever struggle with their <b>mental health</b> amid excessive use of the platforms." There is
8	22-02-14 ??	Therapy	What you might not know is that alcohol and drug use is also associated with <b>mental health</b> problems including depression, anxiety, and havi
9	22-10-27 ZA	capetownnet.com	has forced the country to pay attention, shift focus and shed much-needed light on <b>mental health</b> – an illness that has been stigmatised for fo
10	22-10-10 IN	businesswireindia.com	awareness of mental health issues around the world and to mobilize efforts in support of <b>mental health</b> . This year's theme for the Day is 'Mak
11	22-01-15 AU	au.sports.yahoo.com	emerging and long term needs of today's veterans, including employment, suicide prevention, <b>mental health</b> , caregiver support, and food insi
12	22-12-29 AU	smith.com.au	seemed to have been lost since taking power. Where's Labor's plan for <b>mental health</b> in this country?" # Health Minister Mark Butler will host
13	22-01-27 GB	scotman.com	written: "That's the problem, people view schools as daycare service and <b>mental health</b> is being ignored but many are not ready to have that ex
14	22-06-27 GB	coventrytelegraph.net	concerned: "That's the problem, people view schools as daycare service and <b>mental health</b> is being ignored but many are not ready to have that ex
15	22-08-31 GB	manchestereveningnews.co.uk	is filling their pockets. # "Vulnerable people should be protected, people with <b>mental health</b> issues struggle with things outside of their contr
16	22-10-18 GB	liverpooecho.co.uk	the cornerstone of communities, they can play an important role in addressing suicide and <b>mental health</b> . # " Talking openly to friends, family

Fig. 4. Articles related to "mental health" in NOW Corpus

### 3.4 Cross-Cultural Communication Teaching

Cross-cultural communication is one of the most important and interesting contents in English learning. It is necessary to understand and respect people's way of thinking, values, behavior habits, and so on in different cultural backgrounds. The traditional teaching of intercultural communication is often lack of authenticity and interaction, and can not cultivate students' intercultural awareness and competence. Using NOW Corpus, teachers and students can access the latest news articles on the Internet and analyze and discuss them in cross-cultural communication by looking at the views and attitudes of people in different countries or regions on certain topics or events.

## 4 Summary and Recommendations

This paper introduces the basic situation and functions of NOW Corpus, and how to use it in medical college English teaching. This paper argues that NOW Corpus is an effective resource for medical college English teaching, which can help teachers and students understand the latest medical knowledge and trends, and improve their professional English level and international perspective. This paper suggests that English teachers and students in medical colleges and universities should make full use of NOW Corpus to carry out targeted and creative teaching activities. It is also suggested that the developers and maintainers of NOW Corpus should constantly improve and update the content and functions of NOW Corpus to meet the needs and development of English teaching in medical universities.

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