Evaluation of air pollution and business English vocabulary translation in coastal cities based on distributed storage

Zhaowen Cao

Received: 11 June 2021 / Accepted: 18 July 2021 / Published online: 17 August 2021
© Saudi Society for Geosciences 2021

Abstract
There are many ways to produce environmental pollutants; not only the local pollutants, but also the pollutants in the surrounding areas, would reach the research city. Therefore, it is very important to study the impact of environmental pollution on the surrounding areas in the research city. In order to control environmental pollution and improve environmental quality, this paper analyzes the environmental pollution of coastal cities and evaluates the translation effect of English business words on the basis of distributed memory. The motivation for learning English has become a world of learning, with good research and business. Therefore, numerous non-English-speaking nations, including Arab nations, are endeavoring to improve their instructive framework in teaching English as a language, and the English jargon improves students’ English-speaking capability. It is an important factor. Also, in various countries, there is a lack of motivation for English learners to influence the learning process of students in foreign languages. Understudies in the exploratory gathering altogether improved their inspiration level after a portable learning intercession. Our findings show that apps are useful for underperforming students who are learning English first and improving their confidence. The portable application game was effectively evolved by inspired nearby understudies to learn English as a subsequent language.

Keywords Coastal areas - Air pollution - ESL learners - English language - NO2 concentration

Introduction
As governments have said, the prevention and control of environmental pollution is very important to the health and healthy development of cities, and has developed to a higher level of national strategic development. Two problems should be overcome in the prevention and control of environmental pollution: first, the source of pollutants should be clarified, and then the plan of removing or reducing pollutants should be studied. Therefore, studying the diffusion process of environmental pollutants and investigating the generation of pollutants and their correlation are key to better study air pollutants.

Intercultural business exchanges are receiving increasing interest. The ability to establish a dialogue may be the key to successful business negotiations. But cultural differences are evidenced by the fact that differences in lifestyle, traditions, attitudes, and values can only be used by foreign business partners’ behavioral models to consider their effectiveness. However, there is no specific style of intercultural business communication that is automatically transferred to another culture. It was determined that an essential aspect of the high relevance of the study was a computer-based analysis of the language of intercultural business communication. There is a complete lack of tools for automated analysis of professional language structure.

To help English learners, this research attempted to build a vocabulary test website that will enhance your English learning effectiveness. This vocabulary test website set the format up to several vocabularies of different grades, which are merged into the database and linked with the interactive program’s vocabulary database design. Students can easily log in to the website and take the test. Students will be able to achieve and improve from the test scores fluently. The contributions of this article serve as an example of building a test
site for anyone who wants to build something similar. It helps save time and avoid errors. Generally speaking, Taiwan’s Vocational High School orders in English subjects did not seem to be as strong as those of high school. There are plans for taking English lessons at a college, only three session weeks, and five sessions at high school. From this perspective, it is clear that the average level of English proficiency for graduates from vocational high school is lower than that from high school.

**Literature survey**

The diffusion of environmental pollutants in cities is complex and unclear. Because of the relationship between weather, geography, and other factors, it is difficult to analyze the root causes of urban environmental pollution. The literature points out the relationship between urban business units and individuals on the environment and air quantity (Chen et al. 2018). The waste in the air is analyzed statistically and mathematically according to the description. The concentration of air pollutants, floating particulate matter, PM10, SO2, and NO2, and those co-emitted by factories with environmental pollution is analyzed. The purpose is to reduce the impact of carbon dioxide on the environment and rely on another kind of pollutants (Aguera et al. 2008). This paper studies the air pollution degree of nitrogen dioxide caused by transportation and enterprise production sources in the two cities, and checks the time distribution of NO2 in the two cities according to the data, which were measured by fixed monitoring stations. The pollution of nitrogen dioxide from transportation sources to cities is obviously stronger than that from enterprises.

At the moment, the motivation for learning English has become a world of learning, with good research and business. Therefore, numerous non-English-speaking nations, including Arab nations, endeavor to improve their instructive framework in teaching English as a second language, and the English jargon is significant for improving the English-speaking capability and is a factor (Filippi et al. 2009). It proposes an errand-based learning model for business English data mining. Effectively mining knowledge and challenging learning information based on current business research and classification of English learning content and characteristics.

To improve the professional skills of business English talking in China, a method of rebuilding knowledge of information-based business English education is proposed. Through examination and investigation of China’s present substance and information arrangement of business English training, these essential abilities, for example, tuning in, talking, perusing, composing, and business English interpretation instruction, have been moved in a focused way (Ma et al. 2016). Regardless of the pervasiveness of the business cycle and information consistency investigation strategies, practically speaking, consistently, the executives despite everything require a great deal of manual mediation. Past examinations in the zone of consistence have shown that manually setting/marking regulations cannot guarantee normal ranges. Still, the adverse effects of turnaround time also prove and maintain compliance.

It analyzes the cultural characteristics of languages and methods of negotiating in negotiations, such as discourse vocabulary, emotional level, figurative expressions, terminologies, and computational linguistics. Certain features of different languages of business and professional communication are expressed in the way of automated text analysis. A possible way to extract these features from the text is being explored (Huang and Zhang 2013). It presents an online stage for learning English jargon was made and later utilized because of collective work among educators and undergraduates. Students in the context of English courses differ from their previous knowledge. To solve the problems caused by this situation, an "open" classroom is to use the concept of the Internet of Things (Lien et al. 2017).

It proposes an explicit space language (DSL) for communicating business rules in a business-situated language to completely realize machining. The center’s usefulness of this DSL is the Semantic Leveraging Business Vocabulary and Business Rules (SBVR) standard, which utilizes ordinary language to specify the semantics of the business’s semantic model (Liang et al. 2017). The test items are English words and sentences. Pre-tests and five themes with words and sentences are conducted after the test, and these kindergartens are held. The results show significant benefits before and after the test. These research achievements provide great potential to assist other data APAs and second-language beginners in learning and support multimedia educational environments.

**Materials and methods**

The fuzzy mathematics simulation method, which combines fuzzy mathematics and qualitative simulation, is mainly used to describe the relationship between functions. In qualitative simulation, the timing information is captured by combining with mathematical simulation, and the timing filtering rules are constructed to effectively filter out the singular behavior changes in fuzzy simulation (Raykov et al. 2016). In 1993, Roy Leitch and others proposed a method to develop fuzzy qualitative simulation algorithm by using fuzzy sets. The algorithm allows semi-quantitative expansion of qualitative simulation, and it can describe physical variables more accurately by discretizing the quantity space. By using hierarchical membership to define some common-sense knowledge, the subjective factors in the system model can be combined and reasoned correctly (Sharif et al. 2016). This paper investigates the interaction of air quality data and meteorological data on...
air pollutants in cities. The simulation of wind direction data is shown in Fig. 1, and the simulation of air pollution data is shown in Fig. 2.

The model aims to represent an English translation of a static view of the system from formal vocabulary or structured business rules. Each notion of a different composition function expression and its attributes presents this formalization of how to transform the constituent elements of a class diagram into related elements or attributes. The proposed system block diagram is shown in Fig. 3.

As a result, the formal conversion can be done in other applications. It can also ensure the correctness of conversion from any set of business term and structural rule-class diagrams.

**English vocabulary assessment overview**

The presence of this tool improves the quality of business documents between correspondent English-speaking parties that are fairly imperfect. It can also improve the use of distance learning systems and language learning processes. Composite equation for difference quotient is shown in

\[ f(x) = \frac{x}{x + 1} \]  
\[ = \frac{f(x + h) - f(x)}{h} \]

English is a global language utilized for a considerable lot of the reasons for corporate correspondence around the globe. This is along these lines significant, at any rate, for non-English local speakers who know English as a second language (ESL). In this contradiction, English is South Africa’s primary medium for teaching most academic institutions around the world (Liu et al. 2017). The writing demonstrates that the restricted degree of ESL is as yet the fundamental disadvantage of proficient and viable utilization of English as training for instructors and understudies. Notwithstanding, on account of the focal points and the idea of this investigation, it is the best expectation that mishaps and ICT-based English jargon learning will happen (Marconcini et al. 2009).

\[ \{w^m\} = \text{argmax}(w^m|x') \]  
\[ = \text{argmax} \frac{p(w^m|x')p(w^m)}{p(x')} \]  
\[ = \text{argmax}(w^m|x')p(w^m) \]

where

- \( p(w^m) \) denotes model probability language
- \( p(w^m|x') \) is an acoustic probability model
- \( p(x') \) is an acoustic observation probability

Therefore, current research uses research tools such as images that incorporate the entire game through a given term (especially computer games) (Pan et al. 2017a). As such, participants expected to explain the story of a computer game in combination with a printed computer game guide. It also happens that the opportunity holds the process of direct interpretation, all the new words that the members experience, and the words are planned to get also. They do not have the foggiest idea about their significance (Chen et al. 2014). The current investigation further surveys conscious jargon learning through the appraisal of English vocabulary, which has little blanks, synonyms, and inheritance fills in image word mapping. After an evaluation (reading the printed computer game guide and computer game playing activities) (Shukla et al.)

**Wind speed forecast**

![Wind direction data simulation](image)
2020), you will find hope for success in casual learning activities, with 1 or 2 a little closer to balance and used.

**Business English knowledge structure analysis**

At present, the substance and strategies for showing business English in China are as yet lacking somewhat. In this manner, it is essential to examine the information structure of study or business English and set forward recommendations for development. During the time spent setting up and finishing the substance of business English exercises, it effectively explores how to help students establish the right ethics and view of employment, combined with the cultural differences and innovations of Chinese and Western cultures (Talabi and Tijani 2011). Educational content and business English methods need to be restructured, extending and expanding the environmental background, student competence, and the potential for self-development. Therefore, establishing a knowledge structure for business English education is too heavy (Xing et al. 2006).
It should emphasize teaching key points and standardized knowledge structure teaching principles based on scientific modern education concepts to improve the practicality of business English education. The choice of educational content is scientific and reasonable; due to the talent of business English, the course content is reasonable to choose the actual level of current needs, and the choice of English is practical (El-Baz 1995). To achieve more subject depending on the value of the application and the basic content of the knowledge structure of business education, the content of the lesson should be based on the essential needs and seasons of social improvement. It is in accordance with the overall pattern line of advancement. During the time spent investigating the information structure of business English, the propriety, operability, and extensiveness of instructive substance ought to be considered independently (Singhal et al. 2017).

### Optimization English knowledge structure for business

As indicated by the above examination results, we have to streamline the information structure of business English instruction. During the time spent enhancing the substantive structure of a Business English course, we have a focus on the expert ability of educators, the fitness of understudies, and the balanced utilization of understudies and data instruction to individual word hypothesis

\[
c(w; T, t) = p \left( |w; T, t| x^T \right)
\]

(6)

Scaling factor the business English translation is shown in

\[
y = p(x_r |w) \times \sum_{T} y(h^{m-2}[T-1])
\]

(7)

The teaching process requires rebuilding specialized knowledge of different educational content and directions.

### Reconstruction English teaching mode for business

During the time spent showing business English, the standard encouraging mode must be protected. Concentrated and dissipated picking up teaching modes for Business English courses can be extensively separated into two modes. The acoustic model probability is shown.

\[
(w; T, t) = \arg\max \ p(w; T, t)
\]

(8)

\[
\arg\max \ p(x(w; T, t) \cdot p(w^m) / p(x^t)
\]

(9)

The total probability to intersect this system and the equation is shown in

\[
\sum p(w; T, t|x^t) = 1
\]

(10)

Through the foundation of a uniform educational program in the school and specific uniform courses of action for understudies in the instructing cycle, understudies can be given more opportunity to concentrate freely. During the time spent educating and self-ruling learning, the educator organizes the learning content as per the understudy’s specific learning circumstance and the utilization of the aptitude (Zhou et al. 2017).

### Reconstruction English teaching content for business

As of now, business English training content fundamentally incorporates oral English instruction, language exercises, tuning in to instruction, and so forth. As indicated by the current focal point of Business English teaching and learning, it is based on the English’s major, knowledge structure, and the needs and difficulty of ethnic division. Reenactment of the scene and discussion sessions in the classroom were added to the education.

\[
\text{Error rate} = \frac{S + D + I}{N} \times 100
\]

(11)
The pre-test and post-test scores as shown in Fig. 4.

Conflict of interest
The authors declare that they have no competing interests.

Results and discussion
The consequences of the examination appear as grades of the pre-test and post-test, and the scores of the female and the male people. One-sample statistics are shown in Table 1. The pre-test and post-test scores as shown in Fig. 4.

Conclusions
These studies led to the informed conclusion that the choice of English vocabulary for computer games led to local improvement. To be precise, it can improve the efficiency of collecting clues about the murder case by choosing the main features of the selected computer games that are preferred to confirm. Therefore, the 3-segment estimation, which is satisfied with the translation of the business English vocabulary, is based on the differential combination function formula, and the participants do significant to the word mapping part on the image. A further lesson from the study in this course is to identify relevant information and communication technology tools (in this study, computer games, etc.) in the current era for conducting auxiliary education and learning in this study. Not only did they participate in the games which they agreed with the instructions quite a bit as a result of clarity, game player friendliness, and other playing characteristics, they showed a significant improvement at least in EVT. An image to word mapping section has been included. Carefully selected tasks related to time and play computer game technology can complement educational activities.

Acknowledgements
Educational Reform subject of the Jiangxi Province, I Department of Education—Exploration and Practice of English Listening Teaching Based on Krashen’s Second Language Acquisition Theory No. JXJG-17-24-9.

Declarations
Conflict of interest
The authors declare that they have no competing interests.

Open access
This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution, and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit http://creativecommons.org/licenses/by/4.0/.

References
Aguer F, Aguilar FJ, Aguilar MA (2008) Using texture analysis to improve per-pixel classification of very high resolution images for mapping plastic greenhouses. ISPRS J Photogramm Remote Sens 63:635–646
Chen Y, Lin Z, Zhao X, Wu G, Gu Y (2014) Deep learning-based classification of hyperspectral data. IEEE J Sel Top Appl Earth Observ Remote Sens 7:2094–2107
Chen C, Jiang J, Yan C, Rho S, Shen W, Liu S, Liu Z (2018) Hyperspectral classification based on spectral–spatial convolutional networks. IEEE Trans Artif Intell 68:165–171
El-Baz F (1995) Utilizing satellite images for ground water exploration in fracture zone aquifers. In: In: proceedings of the international conference on water resources Management in Arid Countries, 12–16 march 1995, vol 2. Ministry of Water Resources, Muscat, pp 419–437
Filippone M, Archibald R, Bhaduri B, Bright EA (2009) Hyperspectral agricultural mapping using support vector machine-based endmember extraction (SVM-BEE). Opt Express 17:23823–23842
Huang X, Zhang L (2013) An SVM ensemble approach combining spectral, structural, and semantic features for the classification of high-resolution remotely sensed imagery. IEEE Trans Geosci Remote Sens 51:257–272
Liang P, Shi W, Zhang X (2017) Remote sensing image classification based on stacked denoising autoencoder. Remote Sens 10:16
Liu P, Zhang H, Eom KB (2017) Active deep learning for classification of hyperspectral images. IEEE J Sel Top Appl Earth Observ Remote Sens 10:712–724
Ma X, Wang H, Wang J (2016) Semisupervised classification for hyperspectral image based on multi-decision labeling and deep feature learning. ISPRS J Photogramm Remote Sens 120:99–107
Marconcini M, Camps-Valls G, Bruzzone L (2009) A composite semisupervised SVM for classification of hyperspectral images. IEEE Geosci Remote Sens Let 6:234–238
Pan B, Shi Z, Xu X (2017a) MugNet: deep learning for hyperspectral image classification using limited samples. ISPRS J Photogramm Remote Sens 145:108–119
Pan B, Shi Z, Xu X (2017b) R-VCANet: a new deep-learning-based hyperspectral image classification method. IEEE J Sel Top Appl Earth Observ Remote Sens 10:1975–1986
Raykov YP, Boukouvalas A, Baig F, Little MA (2016) What to do when K-means clustering fails: a simple yet principled alternative algorithm. PLoS One 11:1–28
Sharif HO, Al-Juaidi FH, Al-Othman A, Al-Dousary I, Fadda E, Jamal-Uddeen S, Elhassan A (2016) Flood hazards in an urbanizing watershed in Riyadh, Saudi Arabia. Geomat Nat Haz Risk 7(2):702–720
Shukla AK, Ojha CSP, Garg RD, Satyavati S, Lalit P (2020) Influence of spatial urbanization on hydrological components of the upper Ganga
River basin. India J Hazard Toxic Radioact Waste 24:04020028. https://doi.org/10.1061/(ASCE)HZ.2153-5515.0000508

Singhal V, Aggarwal HK, Tariyal S, Majumdar A (2017) Discriminative robust deep dictionary learning for hyperspectral image classification. IEEE Trans Geosci Remote Sens 55:5274–5283

Talabi AO, Tijani MN (2011) Integrated remote sensing and GIS approach to groundwater potential assessment in the basement terrain of Ekiti area South-Western Nigeria. RMZ-Mater Geoenviron 58(3):303–328

Xing Q, Chen CQ, Shi P (2006) Method of integrating Landsat-5 and Landsat-7 data to retrieve sea surface temperature in coastal waters on the basis of local empirical algorithm. Ocean Sci J 41(2):97–104

Zhou X, Li S, Tang F, Qin K, Hu S, Liu S (2017) Deep learning with grouped features for spatial spectral classification of hyperspectral images. IEEE Geosci Remote Sens Lett 14:97–101