IECE

RESEARCH ARTICLE

Digital Nomenclature Exploration: Leveraging Online Proper Names for Enhanced English Language Acquisition in Higher Education

Liqun Liang[1], Qian Yin[1] and Chunrang Shi[1,*]

[1] School of English Studies, Xi'an International Studies University, Xi'an 710128, China

Abstract

In the context of university-level English education, the instruction on the exploration and understanding of proper names found on websites is critical yet often neglected. This study examines the flawed approaches adopted by students in navigating proper names online, which primarily involve limited and inappropriate website selection, and inaccurate methods for interpreting these names. Specifically, students tend to interpret proper names either out of context or by their literal meanings, leading to misconceptions. To counter these ineffective strategies, this paper proposes a comprehensive pedagogical framework aimed at guiding students towards proper online exploration of proper names. The methodology includes introducing students to a curated list of relevant websites, facilitating comparative analysis of proper names across different sources, and implementing targeted questioning techniques to enhance students' understanding and accurate interpretation of proper names. This approach not only aims to improve students' digital literacy but also enriches their linguistic and cultural comprehension by promoting a deeper engagement with the digital content. The findings suggest that when educators adopt these targeted strategies, students are more likely to achieve a nuanced understanding of proper names, thereby advancing their overall English language proficiency. This research underscores the necessity of integrating digital exploration skills into English language education, advocating for a more informed and critical approach to online content.

Keywords: proper names, english teaching in university, exploring words on the website.

1 Introduction

In university-level English education, mastering proper nouns is a crucial aspect of vocabulary instruction [1], particularly given their cultural and technical significance in names of places, individuals, companies, and organizations. Students often face challenges in understanding these terms. While utilizing online resources to look up explanations is a practical approach, students frequently struggle to extract accurate and relevant interpretations, which can lead to misunderstandings. Artificial intelligence (AI) offers a promising solution to these challenges. Through natural language processing (NLP), AI can provide precise semantic analysis of proper

nouns, offering not only basic definitions but also rich contextual and cultural insights. Furthermore, AI-powered systems can deliver personalized learning experiences by tracking students' progress and identifying areas of difficulty, subsequently recommending targeted resources to enhance comprehension. Additionally, AI-optimized search engines can refine the accuracy and relevance of search results, reducing the risk of misinterpretation [2–5].

Educators can play a pivotal role by guiding students to effectively leverage AI technologies to improve their understanding of proper nouns, thereby fostering both efficiency and accuracy in vocabulary acquisition.

2 Students' improper methods of exploring proper names on websites

2.1 Exploring proper names on just a few websites

The internet abounds with numerous websites and commonly utilized search engines. However, some students are acquainted with only a limited selection of these resources, often resorting to familiar websites for looking up proper names, rather than exploring a broader array of sites [8]. This practice can lead to skewed perceptions, as different websites may offer varying interpretations of the same proper names. Consequently, the information obtained from a restricted set of sources may be unbalanced or partial.

For instance, "linguistics" represents a proper name encapsulating a multifaceted meaning. Sole reliance on a few websites for exploration may result in receiving partial information. Consulting the proper name on a platform like the Youdao website yields the definition: "Linguistics is the scientific study of language and simultaneously the humanistic study of language and literature." However, this definition, while provided by Youdao, lacks comprehensiveness. During the learning period, students are expected to delve into the focal areas of linguistic study, the breadth of linguistics, notable linguists, among other aspects. This underscores the necessity for students to broaden their research across multiple websites to attain a holistic understanding of this proper name, as opposed to limiting their inquiry to the Youdao dictionary alone.

2.2 Exploring proper names on inappropriate websites

Students frequently encounter difficulties in locating valuable information about proper names, primarily due to their inability to utilize suitable websites

for their search. Various websites present distinct interpretations of the same proper names, and certain sites may offer information that is irrelevant, inaccurate, or even nonexistent. Furthermore, the information gleaned can be ambiguous or present conflicting viewpoints, complicating the students' understanding and interpretation of the proper names.

Authoritative sources, such as Baidu and government websites, typically offer more specific and credible information. General platforms like Google and Baidu provide a broad overview of proper names, while specialized websites deliver professional and detailed insights. Additionally, official websites supply authoritative interpretations that are practically significant, ensuring that the information is both reliable and useful for in-depth understanding.

For instance, "Leech" refers to the name of a renowned linguist. However, if students conduct their research on unsuitable websites, they may encounter entirely incorrect definitions. The Collins dictionary, as depicted in Figure 1, defines 'leech' solely as a type of animal, which bears no relevance to the individual's name. Evidently, this definition does not meet our informational needs. Due to the absence of an appropriate explanation on this platform, it becomes necessary to seek information on alternative websites.
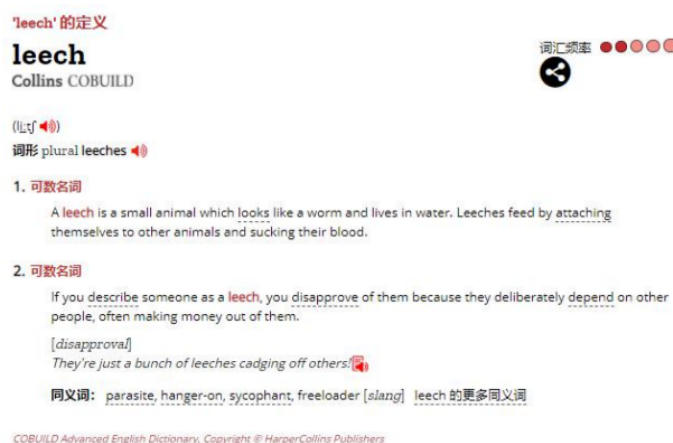

Figure 1. The Definitions of Leech Provided by Collins.

2.3 Frequently exploring the same proper names on websites

Some students approach the process of online information retrieval with insufficient seriousness. Upon locating relevant information about proper names online, they often grasp only the surface-level meaning, neglecting to delve into the underlying implications. This superficial approach prevents a genuine understanding of the proper names,

as students do not endeavor to achieve a deeper comprehension after consulting the relevant data. Consequently, this may lead to repetitive searches for the same proper names upon encountering them again, resulting in a wasteful expenditure of time and energy on rediscovering identical information.

3 Students' improper methods of recognizing the meanings of proper names

3.1 Interpreting out of context

Certain websites offer exceedingly detailed explanations of proper names. However, during the online research process, some students tend to focus solely on the initial part of these explanations, disregarding the subsequent information. Operating under the assumption that a cursory reading suffices for comprehensive understanding, they selectively engage with content that appeals to or is comprehensible to them. This approach, in reality, proves ineffective for attaining a full grasp of the subject matter.

For instance, "The Renaissance" denotes a specific historical epoch. Wikipedia furnishes an extensive discourse on this term. The initial paragraph elucidates: The Renaissance represented a pivotal era in European history, signifying the shift from the Middle Ages to modernity, spanning the 15th and 16th centuries. It emerged subsequent to the Crisis of the Late Middle Ages and coincided with significant societal transformations. Beyond conventional periodization, some advocates of a "long Renaissance" suggest its inception in the 14th century and its culmination in the 17th century. Traditional perspectives emphasize the Renaissance's early modern characteristics, positing it as a departure from preceding epochs. Conversely, numerous contemporary historians accentuate its Medieval continuities, proposing it as an extension of the Middle Ages.

From the aforementioned discussions, we gain insights into the temporal span and scholarly focal points of the Renaissance. However, these details alone fall short of painting a comprehensive picture of the Renaissance. Should students limit their reading to merely the opening paragraph, neglecting subsequent sections, they would grasp only the superficial meanings, omitting the deeper, more abstract significances. These encompass the era's core ethos, its cultural impact, its evolution, and more. A thorough comprehension of the Renaissance can only be achieved through an exhaustive review of all available information.

3.2 Interpreting by literal meaning

When students engage in literal interpretation without achieving genuine comprehension, they are prone to making various errors. Among these, the three most significant mistakes include:

Firstly, some students might grasp only the superficial meanings of proper names, failing to comprehend their deeper implications. The significances of certain proper names can be complex, eluding deep understanding by students. This superficial engagement, stemming from a reluctance to delve into the nuanced meanings, results in acquiring basic information that may hinder their learning process. Additionally, upon first encountering proper names, students might speculate on their meanings, deeming these conjectures correct and fitting. However, these guessed meanings are frequently incorrect or inappropriate.

For instance, students will engage with the concept of the Chinese zodiacs during their studies. "Dragon," a term within the zodiacs, is also a proper name. Initially, the Dragon represents an imagined creature, which encompasses its superficial meaning. In Chinese culture, it symbolizes power and status, whereas, in Western culture, it often represents evil. The Dragon is perceived as a formidable entity marked by aggressiveness in Western narratives [6]. Should students only assimilate this superficial interpretation without considering its cultural significance, they risk developing a skewed understanding of the Dragon. Such misconceptions can adversely affect their cultural education and social interactions.

Secondly, students often struggle to identify the appropriate interpretations of proper names. The esteemed British linguist Leech has delineated seven types of meanings words can possess: conceptual, connotative, social, affective, reflected, collocative, and thematic [9]. Consequently, proper names may also embody multiple meanings, potentially bewildering students. It necessitates that students critically assess and ascertain the specific meaning relevant to their needs. In the endeavor to comprehend proper names thoroughly, it is imperative that students consider all seven dimensions of meaning rather than concentrating solely on a singular facet.

For example, the Water-Splashing Festival signifies more than merely a day for mutual water splashing, representing its conceptual meaning. Festivals

generally embody more than fixed-date occurrences; they encapsulate deeper cultural significances akin to those observed in both Chinese and Western celebrations, reflecting more abstract connotations and denotations [11]. In the pursuit of a profound understanding of any festival, it is crucial to delve into its connotative meaning. Thus, exploring the deeper implications of the Water-Splashing Festival is essential. Upon a thorough examination, students will discover that this festival symbolizes fortune, suggesting that participants can wash away misfortune with the splashed water, thereby embracing luck.

Thirdly, students often struggle to correlate the meanings of proper names discovered online with their significances in specific contexts, leading to inaccuracies in grasping the contextual meanings of these terms. Wang et al.[16] have highlighted that the meanings of a word become distinct and unequivocal when situated within a particular context, rendering them unambiguous and interpretable in a singular manner.

For example, FedEx was instrumental in pioneering the centralization and the "hub and spoke" system. This model has subsequently been embraced by nearly all major airlines, illustrating its impact and adoption within the aviation industry.

The interpretation of a sentence transcends the mere aggregation of its constituent words [7], a principle equally applicable to proper names. Within this framework, the term "hub-and-spoke" embodies a unique contextual significance. The essence of this proper name does not emerge from a straightforward amalgamation of the meanings of its three component words: "hub," "and," and "spoke." Instead, it denotes a prevalent model in the United States where passengers are routed through major "hub" airports before transitioning to subsidiary flights directed to "spoke" airports in proximity to their ultimate destinations.

Another example illustrates this point: The notion was embedded in the consciousness of every white man present. It resided within me, as it did among the spectators, the officers mounted on their perspiring horses, and the white non-commissioned officers marching within the formations [15].

In this context, "NCOs" represents a proper name unfamiliar to many students. When researched on the Youdao website, the students are presented with an explanation as illustrated in Figure 2.

The Youdao website delineates three distinct meanings

Figure 2. The Definitions of NCOs Provided by Youdao Website.

for "NCOs." To ascertain the precise interpretation relevant to the context of the aforementioned sentence, students must evaluate these meanings systematically and determine which one appropriately fits the sentence. This process will enable students to connect these meanings with those in specific contexts, thereby gaining a precise understanding of the contextual significance of this proper name.

4 Guides for students to explore proper names online appropriately

The capacity for exploration constitutes a pivotal aspect of knowledge acquisition and time management, centering on the proficiency of assimilating relevant knowledge. Moreover, the efficacy of acquiring pertinent knowledge presents a challenge that traditional metrics of intelligence quotient (IQ) and emotional quotient (EQ) fail to address. Consequently, this aptitude emerges as a vital third skill requisite for thriving in the information age [17].

This underscores the paramount importance of exploration skills, thereby highlighting the necessity for educators to instruct students in proficient information-seeking techniques. In the subsequent section, we will discuss methodologies for obtaining pertinent information through the exploration of websites.

4.1 Introduction of relevant websites to lead students to choose the appropriate websites for exploring

Navigating the selection of appropriate websites for researching proper names often presents challenges for students, necessitating timely intervention and guidance from educators. Teachers must identify and address the underlying reasons for students' selection of unsuitable websites, providing instruction on choosing the right platforms for accurate information on proper names. This entails patient explanation of the criteria for website selection, ensuring students acquire the skills to interpret website information

correctly. Furthermore, educators should elucidate the distinct characteristics of various websites, guiding students on how to locate specific and up-to-date information. Additionally, teachers play a crucial role in directing students to sources for the latest information that may not be readily available on conventional platforms.

4.2 Comparing the different explanation of proper names from different websites

Hong et al.[12] have indicated that individuals with a heightened capacity for exploration tend to utilize a variety of websites, rather than limiting themselves to a single source. Consequently, students should be encouraged to broaden their research across multiple websites when investigating proper names. Educators should guide students in gathering and comparing information from these diverse sources, enabling them to discern the most reliable and comprehensive data. This approach facilitates a more complete and accurate comprehension of the proper name in question.

For instance, we have investigated the term "greenhouse effect" across various websites, yielding two distinct definitions.

Definition 1 posits that the greenhouse effect arises from gases in Earth's atmosphere trapping the Sun's heat, rendering the planet significantly warmer than it would be sans an atmosphere. This effect contributes to Earth's habitability.

Conversely, Definition 2 explicates the greenhouse effect as a natural phenomenon that elevates the Earth's surface temperature. It elucidates that solar energy reaching the Earth's atmosphere is partially reflected back into space, with the remainder absorbed and then re-emitted by greenhouse gases, such as water vapor, carbon dioxide, methane, nitrous oxide, ozone, and certain man-made chemicals like chlorofluorocarbons (CFCs). This absorption and re-radiation process heats both the atmosphere and the Earth's surface, maintaining the global temperature approximately 33 degrees Celsius higher than it would otherwise be, thereby enabling the existence of life.

While the first definition provides a succinct overview, the second offers a detailed explanation, including the mechanisms through which the Earth's atmosphere is heated, the constituents of greenhouse gases, and empirical data underscoring the greenhouse effect's role in making Earth habitable. Consequently, a comparative analysis of these definitions enables students to attain a comprehensive and precise understanding of the term "greenhouse effect."

4.3 Putting questions to help students get more accurate understanding of the proper names online

Utilizing questions as a teaching technique significantly bolsters English language instruction. This approach, a core component of the interactive teaching model, garnered prominence in France after the 1980s [14]. In this educational approach, teachers utilize logical dialogue to engage students deeply in the material. Under the teacher's guidance, students progressively deepen their understanding of the subject matter [10]. Questioning stands out as the most potent method for facilitating student learning, underscoring that an interactive question-and-answer format is crucial in educational environments. Through such dialogic engagement, students gain detailed insights into specific terms. By formulating a variety of questions, educators guide students toward an in-depth grasp of the subtle meanings inherent in these terms.

For instance, in certain urban environments, workaholism has become so prevalent that it is not deemed out of the ordinary, with people regarding such a lifestyle as the norm. Specifically, government employees in Washington, D.C., often find themselves working sixty to seventy hours weekly.

In this context, "Washington, D.C." serves as a proper noun. Despite its widespread usage, many students are unfamiliar with its precise meanings.

Consequently, educators might pose the following inquiries for discussion:

1.What does "Washington, D.C." fully stand for?

2.Can you break down and explain the meaning of each component in its full name?

3.How do Washington and Columbia differ, and why are they mentioned together?

4.What is the Chinese equivalent for the capital of the United States?

5.Where exactly is the U.S. capital located? Considering there are fifty states, is it situated within any of them?

6.How does Washington State differ from the capital, Washington, D.C.?

By employing such questions, teachers can facilitate a comprehensive understanding of the U.S. capital

among students. More specifically, this approach enlightens students about the etymology and cultural significance of English geographical proper nouns, along with insights into American politics, governance, and geography. The question-and-answer process reveals the variety of information encapsulated in "Washington, D.C.," highlighting the complexity of fully grasping the term. Furthermore, this interactive learning method proves engaging and meaningful, fostering a spirit of inquiry that benefits students by enhancing their critical thinking, learning capabilities, and vocabulary comprehension [13].

5 Conclusion

The instruction of proper names constitutes a fundamental aspect of university-level English education, yet it frequently remains underemphasized by both educators and learners. Indeed, guiding students in learning proper names via website exploration, as facilitated by teachers, proves to be an effective and efficient strategy. Educators are encouraged to innovate and integrate various methodologies into their pedagogical practices, aiming to enhance students' proficiency in researching proper names and accurately comprehending their meanings.

Conflicts of Interest

The authors declare no conflicts of interest.

Funding

References

[1] Xiao, L.(2021).A discussion of the effective teaching of Vocabulary in University. *Overseas English*(04),150-151.

[2] Ma, X., Wang, Y., Wang, Y., Cai, X., & Han, Y. (2022). Survey on chiplets: interface, interconnect and integration methodology. *CCF Transactions on High Performance Computing*, 4(1), 43-52.

[3] Qu, S., Li, B., Wang, Y., Xu, D., Zhao, X., & Zhang, L. (2020, July). RaQu: An automatic high-utilization CNN quantization and mapping framework for general-purpose RRAM accelerator. In *2020 57th ACM/IEEE Design Automation Conference (DAC)* (pp. 1-6). IEEE.[CrossRef]

[4] Li, W., Wang, Y., Li, H., & Li, X. (2019, January). P3M: a PIM-based neural network model protection scheme for deep learning accelerator. In *Proceedings of the 24th Asia and South Pacific Design Automation Conference* (pp. 633-638). [CrossRef]

[5] Wang, Y., Han, Y., Zhang, L., Li, H., & Li, X. (2015, June). ProPRAM: exploiting the transparent logic resources in non-volatile memory for near data computing. In *Proceedings of the 52nd Annual Design Automation Conference* (pp. 1-6). [CrossRef]

[6] Cortés-Morales, S. The (Common) Worlds of Dragons: Nature, Humans, and the Anthropocene in Children's Films. *In Film Landscapes of Global Youth* (pp. 142-155). Routledge.

[7] Yang, X. (2020). The Cultivation of Chinese learners' English writing Competency through learning-oriented assessment. *Theory and Practice in Language Studies*, 10(10), 1227-1233.

[8] Sun, Z., Anbarasan, M., & Praveen Kumar, D. J. C. I. (2021). Design of online intelligent English teaching platform based on artificial intelligence techniques. *Computational Intelligence*, 37(3), 1166-1180. [CrossRef]

[9] Leech, G. (1974/1981).Semantics. *Harmondsworth: Penguin*.

[10] Qi, Q.(2017).Teaching Methods: The Explanation of Concepts. *The Study of Education*(01),95-105.

[11] Quinn, B., Colombo, A., Lindström, K., McGillivray, D., & Smith, A. (2021). Festivals, public space and cultural inclusion: public policy insights. *Journal of Sustainable Tourism*, 29(11-12), 1875-1893. [CrossRef]

[12] Yuan, H. Li, Q.(2015).The Influence of Task and Exploring Ability on The Exploratory Behavior of Users. *Information Work in Library*(15):94-104

[13] Walsh, D., & Paul, R. W. (1986). The Goal of Critical Thinking: from Educational Ideal to Educational Reality.[CrossRef]

[14] Bozkurt, A. (2019). From distance education to open and distance learning: A holistic evaluation of history, definitions, and theories. In *Handbook of Research on Learning in the Age of Transhumanism* (pp. 252-273). IGI Global.

[15] Patton, G. S. (1995). *War as I knew it*. Houghton Mifflin Harcourt.

[16] Wang, Z.F. (1998).Introduction to Chinese Context. Guangzhou: Nanfang Press.

[17] Gondal, U. H., & Husain, T. (2013). Research Article A Comparative Study of Intelligence Quotient and Emotional Intelligence: Effect on Employees' Performance. *Asian journal of Business management*, 5(1), 153-162. [CrossRef]