



Unraveling The Complexity: The Cognitive-Semantic Analysis Of Texts In ICT Discourse

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Abstract: Cognitive-semantic analysis refers to the examination and interpretation of texts in the field of ICT discourse. This approach involves analyzing the cognitive processes and the underlying meaning structures of the text in order to gain insights and understanding of its content and context within the realm of ICT.

Keywords: Cognitive-semantic analysis, ICT discourse, authentic texts, technical terms, manuals, technical specifications, software documentation.

Introduction

As the field of Information and Communication Technology (ICT) continues to evolve, so does the need for a deeper understanding of its intricacies. One powerful tool in gaining insights into ICT discourse is cognitive-semantic analysis. This approach delves into the cognitive processes and semantic structures of texts, offering valuable understanding of the content and context in ICT-related discussions. In this article, we will explore the significance of cognitive-semantic analysis and how it can contribute to unraveling the complexity in ICT discourse.

In today's digital age, information and communication technologies (ICT) have become an integral part of everyday life. Whether it's sending emails, browsing the internet, or using social media platforms, ICT has transformed the way we communicate and interact with others. As a result, the language used in ICT discourse has also evolved, displaying distinct lingua-cognitive characteristics that reflect the unique nature of this domain.

One striking characteristic of ICT discourse is its reliance on technical jargon and abbreviations. Just like any specialized field, ICT has its own vocabulary and acronyms that are often unfamiliar to those outside the industry. For instance, terms like HTML, TCP/IP, and VPN are frequently used and understood by professionals in the field, but might be confusing to the average person. This lexical specificity helps establish a shared understanding among ICT professionals, ensuring effective communication within the community.

Additionally, ICT discourse demonstrates a preference for brevity and conciseness. Due to the fast-paced nature of digital communication, people often strive to convey their messages in the shortest and most efficient way possible. This is evident in the use of abbreviations, numeronyms (such as "i18n" for internationalization), and emojis as a means of expressing emotions or reactions. Such linguistic compactness facilitates quick transmission and comprehension of information in a time-sensitive environment.

Furthermore, the use of metaphorical language and conceptual mapping is prevalent in ICT discourse. As technology progresses and becomes more complex, it becomes increasingly challenging to explain new concepts or ideas without drawing analogies or mapping them onto familiar domains. For instance, terms like "cloud computing," "firewall," or "virus" are metaphors that allow users to conceptualize abstract technological processes in more concrete terms. This use of metaphoric language aids in the comprehension and appropriation of ICT-related concepts for a wide range of users.

ICT discourse often involves the use of specialized genres, such as user manuals, technical specifications, and software documentation. These genres have specific linguistic features and structures that cater to the informational needs of different user groups. For example, user manuals typically follow a step-by-step format, employing imperative verbs and explicit instructions to guide users in the operation of a device or software. This genre-specific language serves the purpose of ensuring clarity and usability for individuals with varying levels of technical expertise.

Another noteworthy characteristic of ICT discourse is its reliance on visual representations, such as diagrams, charts, and infographics. Given the complexity of technological concepts and processes, visual aids play a crucial role in simplifying information and enhancing comprehension. Whether it's a network topology diagram or a data flowchart, visual representations help users grasp the interconnectedness and flow of information within the ICT domain, making it easier to understand complex systems.

Cognitive-semantic analysis is rooted in the study of how the human mind processes information and constructs meaning. By exploring the thoughts, ideas, and reasoning present in ICT texts, this analytical approach aids in comprehending the underlying concepts and the perspectives embedded within the discourse.

One crucial aspect of cognitive-semantic analysis is examining the mental representations that individuals form when engaging with ICT-related content. By analyzing textual cues, syntactical patterns, and semantic structures, researchers can gain insight into how people construe and interpret information in the context of ICT.

Performing cognitive-semantic analysis on ICT texts entails identifying the specific cognitive processes at play. This involves recognizing the underlying conceptual metaphors, the frames of reference, and the underlying cognitive models that shape the discourse. Conceptual metaphors play a fundamental role in how individuals understand and communicate complex ICT concepts. For example, viewing cyberspace as a physical entity with borders and boundaries. By identifying and analyzing such metaphoric mappings, researchers can gain a deeper understanding of how individuals conceptualize and discuss ICT.

In addition to metaphors, cognitive-semantic analysis also focuses on frames of reference. These frames shape how individuals perceive and interpret information in the ICT domain. By examining the frames employed within the discourse, researchers can determine the lens through which individuals view and interpret ICT-related concepts and phenomena.

Furthermore, cognitive models play a vital role in understanding how individuals represent ICT concepts mentally. Whether it is visualizing the functioning of a computer network or conceptualizing the nature of algorithms, cognitive-semantic analysis helps unravel the mental models individuals employ when discussing ICT.

Cognitive-semantic analysis of texts in ICT discourse holds several important implications. Firstly, it facilitates a more comprehensive understanding of the challenges, misconceptions, and knowledge gaps that people may have in the field of ICT. This can aid in the development of effective communication strategies, educational materials, and training programs. Moreover, this analysis

uncovers the shared cognitive patterns and biases that may exist within ICT communities. By identifying the underlying assumptions and mental frameworks, researchers can promote critical thinking, challenge existing preconceptions, and encourage interdisciplinary dialogue in the ICT field. Lastly, cognitive-semantic analysis enables researchers to evaluate the effectiveness of different modes of communication and knowledge transfer in ICT. By examining the cognitive processes involved in understanding texts, researchers can develop more efficient methods of presenting information and fostering comprehension.

In conclusion, ICT discourse exhibits distinct lingua-cognitive characteristics that reflect its unique nature as a specialized field. The reliance on technical jargon, conciseness, metaphoric language, specialized genres, and visual representations are some of the defining features of this discursive domain. Understanding and effectively utilizing these linguistic characteristics not only facilitate efficient communication within the ICT community but also contribute to the broader digital literacy of individuals in an increasingly interconnected world.

Cognitive-semantic analysis offers a powerful lens through which to examine and interpret texts in the ICT discourse. By unraveling the cognitive processes and semantic structures embedded within, this analytical approach enhances our understanding of ICT concepts, highlights misconceptions, and aids in the development of effective communication strategies. As the ICT landscape continues to evolve, cognitive-semantic analysis will play an increasingly vital role in promoting comprehension and facilitating meaningful dialogue within this dynamic field.

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