

PSYCHOLINGUISTIC FACTORS AFFECTING THE UNDERSTANDING OF SPECIALIZED TERMS BY TRANSLATORS

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Annotation: This article investigates the psycholinguistic factors that influence the comprehension of specialized terms by translators. It discusses how cognitive processes such as memory, attention, prior knowledge, and conceptual mapping affect the accurate understanding and rendering of domain-specific terminology. Drawing on examples from scientific, legal, and technical texts, the paper highlights common barriers to terminological understanding, including unfamiliarity with field-specific concepts, cognitive overload, and ambiguous lexical structures. Recommendations are made for translator training programs to incorporate psycholinguistic awareness and cognitive strategy development.

Keywords: psycholinguistics, specialized terms, cognitive barriers, translator training, domain knowledge, conceptual mapping

Annotatsiya: Ushbu maqolada tarjimonlar tomonidan maxsus (sohaviy) terminlarni tushunishga ta'sir qiluvchi psixolingvistik omillar tahlil qilinadi. Xotira, diqqat, oldindan mavjud bilimlar va konseptual xaritalash kabi kognitiv jarayonlar terminlarni to'g'ri anglashga qanday ta'sir ko'rsatishi yoritiladi. Ilmiy, huquqiy va texnik matnlardan olingan misollar orqali tarjimada uchraydigan asosiy to'siqlar — terminologiyadagi notanishlik, kognitiv yuklama va leksik noaniqliklar muhokama qilinadi. Shuningdek, tarjimonlarni tayyorlashda psixolingvistik xabardorlik va kognitiv strategiyalarni rivojlantirish bo'yicha tavsiyalar keltiriladi.

Kalit so'zlar: psixolingvistika, maxsus terminlar, kognitiv to'siqlar, tarjimon tayyorlash, sohaga oid bilim, tushunishni osonlashtirish

Аннотация: В данной статье рассматриваются психолингвистические факторы, влияющие на понимание специализированной терминологии переводчиками. Обсуждаются когнитивные процессы, такие как память, внимание, предварительные знания и концептуальное картирование, и их влияние на точность восприятия и перевода. На примерах из научных, юридических и технических текстов анализируются типичные барьеры: незнание предметной области, когнитивная перегрузка и двусмысленные языковые структуры. Даны рекомендации по внедрению психолингвистических знаний и когнитивных стратегий в программы подготовки переводчиков.

Ключевые слова: психолингвистика, специализированные термины, когнитивные барьеры, подготовка переводчиков, предметные знания, концептуальное картирование

In the rapidly expanding field of specialized translation, the accurate understanding of domain-specific terms remains one of the most significant challenges. While terminological databases and glossaries help reduce lexical inconsistencies, many difficulties stem from **psycholinguistic limitations** rather than a mere lack of lexical access [1, p. 44].

This article examines how **cognitive processes** such as working memory, long-term knowledge, attention allocation, and conceptual associations impact a translator's ability to correctly comprehend and translate specialized terms.

Theoretical Framework

Psycholinguistics investigates how language is processed, stored, and produced in the human brain. According to Gile's Effort Models [2, p. 22], translation is a **highly demanding cognitive task** requiring coordination of comprehension, memory, and production.

Specialized translation places additional demands due to:

- Dense terminology
- Limited redundancy in discourse
- Complex syntax
- Lack of prior exposure to field-specific concepts

These factors often lead to **cognitive overload**, reducing the translator's ability to process and recall accurate meanings [3, p. 105].

Major Psycholinguistic Barriers

Limited Domain Knowledge

Understanding specialized terms requires **semantic depth**. For example, a translator unfamiliar with molecular biology may misinterpret terms like *epigenetic regulation* or *transcription factors* [4, p. 76].

Cognitive Overload

Translators juggling between unfamiliar terms, long sentence structures, and contextual meaning may suffer from reduced **working memory capacity**, affecting overall comprehension [5, p. 61].

Lexical Ambiguity

Terms like *charge* (in law vs. physics) or *bench* (in furniture vs. court context) demonstrate the importance of **contextual disambiguation**.

Lack of Conceptual Mapping

New terminology often lacks direct equivalents in the translator's mental lexicon. Without proper **conceptual mapping**, terms remain opaque, and the risk of literal or distorted translations increases [6, p. 38].

Examples

Term	Field	Misunderstood As	Correct Interpretation
<i>Pro forma invoice</i>	Trade/Economy	Formal receipt	Preliminary document for customs use
<i>Mutation load</i>	Genetics	Amount of mutations	Harmful mutation burden in a genome
<i>Carbon credit</i>	Ecology	Money value for carbon	Permit to emit limited CO ₂

These examples highlight how unfamiliarity and weak domain-concept mapping lead to erroneous interpretations.

Cognitive Strategies to Overcome Barriers

1. **Prior Domain Exposure:** Translators must build foundational knowledge in target fields through reading or training.
2. **Chunking & Repetition:** Breaking down complex terms and revisiting them improves **working memory efficiency** [7, p. 93].
3. **Glossary Construction:** Self-made or institution-based glossaries reinforce conceptual familiarity.
4. **Conceptual Visualization:** Diagrams or schemas help map abstract terms to known structures.
5. **Metacognitive Monitoring:** Awareness of misunderstanding triggers deeper review and research.

Implications for Translator Training

Curricula should include:

- Courses on **cognitive linguistics and psycholinguistics**
- Field-specific modules (e.g., medical, legal)
- **Simulation-based learning** with authentic texts
- Reflective practice on **errors and interpretation gaps**

As Pöchhacker notes, “interpretive competence is inseparable from cognitive preparedness” [8, p. 51].

Translating specialized terms is as much a **cognitive process** as it is a linguistic one. Psycholinguistic barriers — such as cognitive overload, unfamiliar concepts, and weak mental representations — hinder accurate comprehension and reduce terminological fidelity.

By equipping translators with psycholinguistic awareness and field-specific strategies, training programs can bridge the gap between terminology and cognition. Thus, a translator becomes not only a language expert but also a **domain-aware cognitive processor**.

References

1. Alves, F. (2007). *Cognitive Approaches to Translation Studies*. Routledge. — p. 44
2. Gile, D. (1995). *Basic Concepts and Models for Interpreter and Translator Training*. John Benjamins. — p. 22
3. Shreve, G. (2006). “The Deliberate Practice of Translation,” *Journal of Translation Studies*, 2(1). — p. 105
4. Schaffner, C. (2004). *Translation Research and Interpreting Studies*. Multilingual Matters. — p. 76
5. Kussmaul, P. (1995). *Training the Translator*. John Benjamins. — p. 61
6. Bell, R. T. (1991). *Translation and Translating: Theory and Practice*. Longman. — p. 38
7. Baddeley, A. (2000). *Working Memory and Language*. Psychology Press. — p. 93
8. Pöchhacker, F. (2004). *Introducing Interpreting Studies*. Routledge. — p. 51