структуры формируют концептуальные системы, определяя способы мышления, категоризации и интерпретации информации.

Гипотеза лингвистической относительности, теория языковой картины мира и концепция лингвокреативного мышления позволяют глубже понять механизмы взаимодействия языка и сознания. Язык влияет не только на индивидуальное восприятие, но и на общественное сознание, определяя нормы, ценности и социальные установки.

Таким образом, изучение психолингвистических аспектов влияния языка на когнитивные процессы остается важной областью исследований, позволяющей понять механизмы взаимодействия языка, мышления и культуры.

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COGNITIVE LOAD THEORY AND ITS APPLICATION FOR LEARNING

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Annotation. *Why is learning effortful? Why do we struggle to learn calculus but easily learn our mother tongue? How can we make hard skills easier to learn? Cognitive load theory is a powerful framework from psychology for making sense of these questions. Cognitive load theory, developed in the 1980s by psychologist John Sweller, has become a dominant paradigm for the design of teaching materials. In this essay, I explain the theory, some of its key predictions, and potential applications for your learning.*

Key words. *Central concept, material, distinction, retrieval practice, experiments, focus, procedure involves, information.*

The central concept in cognitive load theory is that we have limited mental bandwidth for dealing with new information, but no such limitations when dealing with previously mastered material. For example, the first time you saw an algebraic expression (e.g., 4 + x = 7), you might

have been a bit confused by the "x." The idea of moving statements probably seemed strange—before that, you just had to calculate what was on the other side of the equals sign. However, notice what *wasn't* confusing: You already knew the numbers. You knew what "+" meant. These things probably didn't stand out at all since you already understood them. Imagine how much harder it would be to understand algebra if you didn't already know these things. This phenomenon explains why we can struggle with challenging classes. Suppose we are missing foundational patterns in long-term memory. In that case, instruction may require us to juggle too many new pieces of information simultaneously. These will slip out of working memory, and we'll fail to learn.

The working memory system is a form of conscious learning. But not all learning is conscious. Psychologists have long marveled at children's ability to acquire perfect pronunciation in their first language or recognize faces. People socialize into cultures without always being able to articulate those cultures' rules.Cognitive load theorists argue that we're evolutionarily predisposed to learn certain patterns of information. Some of these skills and subjects are acquired without effortful cognitive processing.[1] Other skills (such as literacy and numeracy) have not been around long enough for us to have innate learning mechanisms. Instead, we learn these skills by relying on other, innate learning mechanisms (letter recognition seems to co-opt parts of the brain designed for recognizing faces) and more general-purpose learning mechanisms that involve conscious processing.[2] This distinction helps explain why we learn some things effortlessly, while other subjects require years of specialized training

One reason problem solving is difficult is that it requires you to keep in mind the goal you're trying to reach, how far you are from the goal, and potential operations to move forward. This creates a lot of cognitive load that makes it harder to identify the solution procedure. Removing an explicit goal can also reduce cognitive load. For example, a classic trigonometry problem might ask a student to find a particular angle. A "goal-free" way to present this would be to ask students to find as many angles as possible. Research shows that early, goal-free problems result in greater learning, consistent with cognitive load theory.[3] The downside of goal-free practice, however, is that if there are too many possible actions, most of those explored will be useless. Solving a trigonometry puzzle with several unknowns is helpful. But learning to program by randomly typing in commands is not. Worked examples tend to be a more general tool, since they enable useful patterns to be learned rather than guessed at.

While some amount of "figuring things out" is often the only path available, this can make it harder to grasp the key concepts. There are a few tools you can apply, as a learner, to make this easier:

- **Look for examples online.** Khan Academy and many other websites offer detailed instructions and worked examples for common problems.
- **Look for problem sets with solutions.** This was a big part of my MIT Challenge. Copious problem sets with solutions let you shift between studying the steps of a worked solution and practicing it yourself. This approach tends to beat instructions that only talk about problem solving at a general level (and omit the specifics of a worked example). It also allows you to shift to solving problems yourself once you've gotten a good grasp of the material.
- **Self-explain your homework when given feedback.** In a traditional class, solutions often aren't provided until long after the homework assignment. In this case, after you get the solutions, spend the time to thoroughly explain to yourself the solution to problems you found difficult. Self-explanations are a germane load that ensures your homework feedback is put to good use.

This approach applies to non-technical subjects as well. When learning to paint, I made heavy use of video tutorials where I worked on the same painting as the instructor. I'd usually watch the video through once, then work alongside the instructor on a second pass.

Cognitive Load Theory provides a valuable framework for understanding how we learn and process new information. It highlights the limitations of working memory and explains why some subjects require extensive effort while others are acquired naturally. Effective learning strategies, such as using worked examples, goal-free problems, and self-explanation, can help manage cognitive load and improve retention. By applying these principles, educators and learners can create more efficient and accessible learning experiences.

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METAFORALAR VA ULARNING BADIIY MATNLARDAGI ROLI

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Annotatsiya: *Metaforalar badiiy adabiyotda asarlar va she'rlarning yanada ta'sirchan bo'lishini, barcha so'zlarni mahorat bilan qo'llay olish mumkinligi shuningdek o'quvchilar diqqatini tortishi bilan boshqa til uslublaridan farq qiladi.Ushbu maqolada badiiy adabiyotda qo'llangan metaforalarning tahlili bilan tanishib chiqishingiz mumkin.*
Kalit so'zlar: *metafora, badiiy adabiyot, til uslublari, asarlar, she'rlar, tahlil.*

Metafora (yunoncha "metaphora" – ko'chirish) – biror predmetning belgisini, harakatini yoki holatini boshqa narsa bilan o'xshashlik asosida bog'lash natijasida hosil bo'ladigan majoziy ma'no ifodasidir. Metafora natijasida so'z yoki iboraning ma'nosi kengayib, yangi ma'no tusini oladi. Quyida biz metaforada ma'no ko'chish holatini ko'rib chiqamiz:

Inson a'zolarining nomi narsalarga ko'chish oraqali metafora hosil bo'ladi. Masalan: *ko'z* (odamning ko'zi) → *buloqning ko'zi*. **"Ko'z"** so'zi dastlab insonning ko'rish a'zosi sifatida tushunilsa, u **"buloqning ko'zi"** iborasida suv chiqadigan joyni anglatadi. Bu yerda **ko'z** so'zi "manba", "boshlanish nuqtasi" ma'nosida ishlatilgan.

Inson kiyimlari qismlarining nomlari va hayvon a'zolari nomlari ham o'xshashlik asosida boshqa narsalarga ko'chadi va yangi ma'nolar hosil qiladi.

Inson kiyimlari qismlarining nomi narsalarga ko'chishi: *yeng* (ko'ylakning yengi) → *daryoning yengi*.

Qush, parranda, hayvon a'zolari nomi narsalarga ko'chishi: *oyoq* (insonning oyoqlari) → *stolning oyoqlari*.