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# THE ROLE OF PREDICTION SKILLS IN THE READING COMPREHENSION PROCESS: PSYCHOLINGUISTIC FOUNDATIONS AND PEDAGOGICAL IMPLICATIONS FOR EFL

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**Annotation:** Reading comprehension in a foreign language is not the passive decoding of symbols but an active, constructive process in which prediction - the reader's anticipation of upcoming content on the basis of title, context and background knowledge - occupies a central position. This article analyses the role of prediction (anticipation) skills in the reading-comprehension process and derives pedagogical implications for English as a Foreign Language (EFL). The aim of the study is to clarify the concept and the types of prediction, to establish its psycholinguistic and cognitive foundations, and to explain its relationship with reading comprehension. A theoretical-analytical method was employed, combining conceptual analysis, a cross-linguistic comparison of definitions across the English, Russian and Uzbek methodological traditions, and a synthesis of psycholinguistic and pedagogical scholarship. The results show that, although the phenomenon is labelled differently across traditions (prediction; вероятностное прогнозирование / антиципация; antitsipatsiya), its essence converges on a single mechanism - the reduction of uncertainty through the prior elimination of unlikely alternatives. Prediction operates at both the content (semantic) and the linguistic (lexical) level and integrates top-down and bottom-up processing. Its cognitive basis is provided by schema theory, the theory of automaticity and recent psycholinguistic accounts of incremental, anticipatory language processing; prediction is, in Smith's formulation, "the core of reading". The discussion demonstrates that foreign-language learners predict less efficiently than native speakers because of limited linguistic experience, and that extensive reading provides a natural means of building the schematic and linguistic resources on which prediction depends. The study concludes that prediction is an indispensable, central component of reading comprehension that must be developed explicitly and systematically, and offers practical recommendations for cultivating it at the pre-, while- and post-reading stages.

**Key words:** prediction, anticipation, reading comprehension, psycholinguistic model, schema theory, top-down processing, contextual guessing, extensive reading, EFL, reading strategies.

**Annotatsiya:** Chet tilida o'qib tushunish belgilarni passiv dekodlash emas, balki o'quvchining faol, konstruktiv jarayoni bo'lib, unda oldindan taxmin qilish - sarlavha, kontekst va tayanch bilimga tayanib matnning keyingi mazmunini bashorat qilish - markaziy o'rin egallaydi. Ushbu maqola oldindan taxmin qilish (antitsipatsiya) ko'nikmalarining o'qib tushunish jarayonidagi o'rnini tahlil qiladi va chet tili ta'limi uchun pedagogik xulosalarni ilgari suradi. Tadqiqotning maqsadi - oldindan taxmin qilish tushunchasi va turlarini oydinlashtirish, uning psixolingvistik

hamda kognitiv asoslarini belgilash va matnni tushunish bilan o‘zaro bog‘liqligini ochib berishdir. Nazariy-tahliliy usul qo‘llanildi: tushunchaviy tahlil, ingliz, rus va o‘zbek metodik an’analaridagi ta’riflarni qiyoslash hamda psixolingvistik va pedagogik adabiyotlarni umumlashtirish. Natijalar shuni ko‘rsatadiki, hodisa turli an’analarda turli atamalar bilan (prediction; вероятностное прогнозирование / антиципация; antitsipatsiya) ifodalansa-da, uning mohiyati bir mexanizmga - ehtimoli kam variantlarni oldindan bartaraf etish orqali noaniqlikni kamaytirishga - birlashadi. Oldindan taxmin qilish ham mazmun (ma’noviy), ham til (leksik) darajasida amal qiladi va “yuqoridan pastga” hamda “pastdan yuqoriga” qayta ishlashni birlashtiradi. Uning kognitiv zaminini sxema nazariyasi, avtomatlashuv nazariyasi va tilni bosqichma-bosqich, kutilma asosida qayta ishlashga oid zamonaviy psixolingvistik qarashlar tashkil etadi; F. Smit ta’biri bilan aytganda, oldindan taxmin qilish - “o‘qishning o‘zagi”dir. Munozarada ko‘rsatilishicha, chet til o‘rganuvchilari cheklangan til tajribasi tufayli ona tili egalariga nisbatan kamroq samarali taxmin qiladilar, ekstensiv o‘qish esa taxmin tayanadigan sxematik va lisoniy zaxirani shakllantirishning tabiiy vositasidir. Xulosa qilib, oldindan taxmin qilish - o‘qib tushunishning ajralmas, markaziy tarkibiy qismi bo‘lib, uni ongli va tizimli rivojlantirish zarur; o‘qishning barcha bosqichlarida uni shakllantirish bo‘yicha amaliy tavsiyalar taqdim etiladi.

**Kalit so‘zlar:** oldindan taxmin qilish, antitsipatsiya, o‘qib tushunish, psixolingvistik model, sxema nazariyasi, “yuqoridan pastga” qayta ishlash, kontekstual taxmin, ekstensiv o‘qish, EFL, o‘qish strategiyalari.

**Аннотация:** Понимание прочитанного на иностранном языке - это не пассивное декодирование знаков, а активный конструктивный процесс, в котором прогнозирование (антиципация) - предвосхищение читателем последующего содержания на основе заголовка, контекста и фоновых знаний - занимает центральное место. В статье анализируется роль навыков прогнозирования в процессе понимания чтения и выводятся педагогические следствия для обучения английскому как иностранному (EFL). Цель исследования - уточнить понятие и типы прогнозирования, установить его психолингвистические и когнитивные основы и раскрыть связь с пониманием прочитанного. Применён теоретико-аналитический метод: концептуальный анализ, сопоставление определений в английской, русской и узбекской традициях и синтез психолингвистической и педагогической литературы. Результаты показывают, что при различии терминов (prediction; вероятностное прогнозирование / антиципация; antitsipatsiya) сущность явления сводится к единому механизму - снижению неопределённости путём предварительного исключения маловероятных вариантов. Прогнозирование действует на смысловом и языковом уровнях и объединяет обработку «сверху вниз» и «снизу вверх». Его когнитивную основу составляют теория схем, теория автоматизации и современные психолингвистические модели инкрементальной, антиципирующей обработки языка; по выражению Ф. Смита, прогнозирование - «ядро чтения». Делается вывод, что прогнозирование - неотъемлемый центральный компонент понимания чтения, требующий целенаправленного и систематического развития; предлагаются практические рекомендации.

**Ключевые слова:** прогнозирование, антиципация, понимание чтения, психолингвистическая модель, теория схем, обработка «сверху вниз», контекстуальная догадка, экстенсивное чтение, EFL, стратегии чтения.

## Introduction

Reading is one of the most important channels through which foreign-language learners receive comprehensible input, and reading comprehension is increasingly understood not as the linear decoding of letters into sounds and words but as an active, constructive interaction between the reader and the text. Within this interactive view, *prediction* - the reader's anticipation of what a text is likely to say next, on the basis of its title, the surrounding context and the reader's background knowledge - occupies a central place. The recognition of prediction as a core reading mechanism marks a decisive shift from the audiolingual conception of reading as a passive, "self-emerging" skill to the psycholinguistic conception advanced by K. Goodman and F. Smith [1], [2].

The theoretical importance of prediction is matched by its practical relevance for English as a Foreign Language (EFL). Skilled readers process text rapidly precisely because they do not attend equally to every graphic detail; instead, they sample the text and use context and prior knowledge to anticipate meaning, confirming or revising their expectations as they read [2], [3]. Weaker readers, by contrast, tend to decode word by word, fail to exploit contextual cues and consequently read both more slowly and with poorer comprehension [4], [5]. For university philology students who must engage independently with large volumes of academic and literary text, the ability to predict is therefore not an optional embellishment but a foundational component of reading competence. This concern is especially pertinent in contexts where reading literacy requires systematic strengthening: for first-year philology students, who arrive from the general-education system and are expected to read extensively in English, the deliberate development of prediction can be a decisive factor in the transition to autonomous, fluent reading. Recent scholarship reframes reading competence itself as a complex system of skills - of which prediction is an integral part - rather than as a mere decoding activity [27].

Despite this significance, prediction remains comparatively under-theorised and under-developed in EFL classroom practice. Terminological fragmentation across the English, Russian and Uzbek methodological traditions obscures the underlying unity of the phenomenon; the relationship between prediction and comprehension is often asserted rather than analysed; and the cognitive conditions under which foreign-language learners can develop efficient prediction are seldom made explicit. This constitutes a research gap that the present study addresses.

Accordingly, the aim of this article is to analyse the role of prediction skills in the reading-comprehension process and to derive pedagogical implications for EFL. Three tasks follow from this aim: (1) to clarify the concept of prediction and its types across methodological traditions; (2) to establish the psycholinguistic and cognitive foundations of prediction; and (3) to explain the relationship between prediction and reading comprehension and its consequences for foreign-language instruction.

Methods

The study employs a theoretical-analytical (conceptual-comparative) method appropriate to its object, which is a construct rather than an experimental variable. Three complementary procedures were combined. First, **conceptual analysis** was used to isolate the defining features of prediction as described by leading psycholinguists and methodologists. Second, a **cross-linguistic comparison** of definitions was carried out across the English tradition (*prediction*), the Russian tradition (*вероятностное прогнозирование / антиципация / смысловая догадка*) and the Uzbek tradition (*antitsipatsiya*), in order to determine whether the differing terms denote a single phenomenon.

Third, a **synthesis of psycholinguistic and pedagogical scholarship** was conducted to reconstruct the cognitive basis of prediction and its link with comprehension, drawing on classic and contemporary sources retrieved from Scopus- and Web of Science-indexed journals, foundational monographs and specialist reading research. The findings are organised into three result strands corresponding to the study's tasks: the concept and types of prediction; its psycholinguistic-cognitive foundations; and its relationship with comprehension.

Results

**The concept and types of prediction**

The most influential definitions converge on a single mechanism. Goodman famously characterised reading as a "psycholinguistic guessing game" - a cycle of *sampling, predicting, testing and confirming* in which the reader anticipates meaning from partial textual cues rather than processing every element [1]. Smith gave the concept its most precise formulation, defining prediction as "the prior elimination of unlikely alternatives" and, in information-theoretic terms, as the *reduction of uncertainty*; he warned against equating prediction with reckless guessing and insisted that "reading is impossible without prediction", elevating it, in his later work, to "the core of reading" [2], [6]. Nunan situates prediction within the interactive model, in which the reader shuttles continuously between top-down and bottom-up processing and, in the top-down mode, "begins with a set of hypotheses or predictions about the meaning of the text" [7]. Brown similarly describes reading as parallel processing, in which the brain simultaneously attends to letters, syntax, discourse and the schemata the reader brings to the text [8].

The Russian and Uzbek traditions describe the same mechanism under different names. Velikova analyses anticipation (*антиципация*) as a form of "advance reflection" (опережающее отражение) whose essential function is the maximal elimination of uncertainty in decision-making [22], while Karyakina treats contextual guessing (*контекстуальная догадка*) as "the ability to independently interpret language units on the basis of the mechanism of probabilistic prediction" [21]. In the Uzbek methodological tradition, J. Jalolov identifies anticipation and the "approximate guessing of unknown word meaning" as important reading skills and regards the insufficient practice of the exercises that form them as a methodological shortcoming [24]. This cross-linguistic comparison confirms that *prediction*, *антиципация / вероятностное прогнозирование* and *antitsipatsiya* are three names for one phenomenon: the learner's context- and knowledge-based anticipation of meaning prior to full perception, and the consequent reduction of uncertainty.

Prediction can be classified along several dimensions. By **level of processing**, a distinction is drawn between *content (semantic) prediction* - anticipating the general meaning, events and development of a text - and *linguistic (lexical) prediction* - guessing the meaning of an unknown word or phrase from context and morphology. By **direction of processing**, prediction of global meaning corresponds to top-down processing, whereas the decoding of individual language units corresponds to bottom-up processing; the skilled reader flexibly combines both, whereas the weak reader, relying on faulty prior information, may fall into successive cycles of erroneous prediction. Jalolov additionally distinguishes prediction by its **object** - the anticipation of a language form versus the anticipation of textual content. These types are not mutually exclusive but operate simultaneously and in mutual support during real reading: by predicting individual language units the reader moves on to modelling the meaning of the whole text, so that lexical prediction functions as a bridge to semantic prediction.

The psychological reality of this graded mechanism is confirmed by research on probabilistic prediction. Studies in the Russian tradition establish a direct link between a learner's mental activity - verbal fluency and flexibility - and the number of hypotheses generated, that is, the level of prediction, which in turn reflects the maturity of the learner's "language set" (языковая установка) formed in the course of foreign-language study. Prediction is therefore not a fixed trait but a trainable skill grounded in the learner's accumulated language experience, and it can be strengthened through targeted exercises and through the comparative (contrastive) use of the learner's first and previously studied languages [23], [24].

**Psycholinguistic and cognitive foundations**

Smith identifies three cognitive reasons for the necessity of prediction: the human concern with what is *about to happen* rather than with the present moment; the excessive ambiguity of language, which must be constrained in advance if the reader is not to be overwhelmed by possibilities; and the processing cost of choosing among many alternatives, which prediction reduces by narrowing the field before the eye arrives [6]. These reasons distinguish the fluent reader - whose "eye is always ahead of the voice" - from the struggling reader fixated on the word before his eyes [6].

The cognitive basis of prediction is provided by several converging theories. **Schema theory** holds that comprehension proceeds by mapping textual input onto the reader's pre-existing knowledge structures; top-down processing occurs as the system "makes general predictions based on higher-level, general schemata and then searches the input" to confirm them [7], [10]. The **theory of automaticity** (LaBerge and Samuels) explains why prediction is possible: when lower-level processes such as word recognition become automatic, cognitive resources are freed for the higher-level processes of anticipation and interpretation [11]. Contemporary psycholinguistics reinforces this account: the "Now-or-Never bottleneck" model argues that language must be processed incrementally and predictively because the perceptual trace is fleeting and must be "chunked and passed on" before it decays [13]. Finally, research on the "good language learner" independently corroborates the centrality of prediction: among the characteristics summarised by Rubin, successful learners "use contextual cues", "learn to make intelligent guesses" and tolerate uncertainty by continuing without understanding every word [20] - precisely the behaviours that constitute skilled prediction, and which R. Oxford classifies as the central "compensation" strategy of *guessing intelligently* [17].

**The relationship between prediction and comprehension**

A developed prediction capacity yields several measurable benefits for comprehension. Syntheses of the psycholinguistic literature note that well-developed prediction increases the completeness, depth and volume of comprehension, saves time in dictionary-free reading, expands the reader's "potential vocabulary" (words never previously encountered but understood on first reading through context and morphology) and enriches the learner's overall language experience [24]. Because derived and cognate words make up roughly one-third of all content words, the ability to predict such items substantially widens the reader's effective lexicon without additional memorisation. Prediction thus operates as an economy principle in reading: it reduces the amount of external visual information the reader must process and thereby accelerates fluent, meaning-focused reading.

The convergence of these theoretical strands supports a strong claim: prediction is not an auxiliary but a central mechanism of reading comprehension. Because words are polysemous and text is ambiguous, comprehension depends on the reader's continuous anticipation of the most probable meaning and the rapid elimination of improbable alternatives [6]. Empirical work reinforces the link. Studies of extensive reading show that sustained reading strengthens precisely the top-down, prediction-based processing measured by "global" comprehension questions more than it strengthens bottom-up processing [25], and that reading experience - "print exposure" - enriches the schematic and linguistic resources on which prediction depends [3], [29]. Conversely, the *Reduced Ability to Generate Expectations* (RAGE) hypothesis holds that foreign-language learners predict less efficiently than native speakers in real time; crucially, this difference is one of *degree*, attributable chiefly to insufficient language experience rather than to any qualitative deficit [12]. The pedagogical consequence is direct: increasing learners' language experience - most naturally through extensive reading - is an effective means of narrowing this gap and of developing the prediction skill on which comprehension rests.

Discussion

Taken together, the results carry three implications for EFL pedagogy. First, because prediction is central to comprehension yet develops slowly and unevenly in a foreign language, it must be cultivated *explicitly and systematically* rather than left to emerge on its own; the widespread neglect of the exercises that form it, noted by Jalolov, is a genuine methodological shortcoming [24]. Second, the RAGE evidence implies that the most powerful lever for improving prediction is increased exposure to comprehensible text: extensive reading, by immersing learners in large quantities of self-selected, level-appropriate material, builds the schematic and lexical base that efficient prediction requires while preserving the low-anxiety, pleasure-oriented conditions optimal for acquisition [3], [16], [29]. Extensive reading and prediction are thus mutually reinforcing: prediction makes fluent extensive reading possible, and extensive reading develops prediction.

Third, the analysis specifies *where* and *how* prediction should be developed. The pre-reading stage is decisive, because it is here that the reader activates background knowledge and forms expectations from the title, key words and visual cues; leading methodologists agree that "prediction is vitally important if we want students to engage fully with the text" and that the teacher's task is to provoke this prediction through pictures, headlines and pre-text discussion [26]. The priority of the pre-reading stage is not merely theoretical. In an empirical comparison of three preparatory conditions with foreign-language readers of differing proficiency, the pre-reading condition - designed to help readers apply the appropriate schema to the passage - proved more effective than vocabulary-focused or repeated-reading conditions for lower-proficiency learners, indicating that pre-reading, schema-activating tasks that help learners apply what they already know can significantly improve comprehension [7]. For beginning university learners, whose linguistic resources are still limited, the systematic cultivation of pre-reading prediction is therefore especially valuable, and it should be sustained through the while- and post-reading stages so that hypothesis formation, testing and evaluation become an integrated habit rather than an isolated warm-up. During reading, learners test and revise their hypotheses, and after reading they evaluate them - a cycle that mirrors Goodman's sampling–predicting–testing–confirming model and that can be trained through title-, picture-, context- and story-continuation tasks and, in an extensive-reading format, through low-burden predict–read–confirm techniques that do not disrupt pleasure

reading. This positions prediction not as a peripheral sub-skill but as an organising principle for the methodology of teaching reading.

Conclusion

This article has analysed the role of prediction skills in the reading-comprehension process and their implications for EFL. The conceptual and cross-linguistic analysis shows that *prediction*, *антиципация* and *antitsipatsiya* denote a single mechanism - the reduction of uncertainty through the prior elimination of unlikely alternatives - that operates at both the content and the linguistic level and integrates top-down and bottom-up processing. Its cognitive foundations lie in schema theory, the theory of automaticity and contemporary models of incremental, anticipatory processing, which together justify Smith's characterisation of prediction as "the core of reading". Because foreign-language learners predict less efficiently owing to limited language experience, and because extensive reading naturally builds the resources on which prediction depends, the development of prediction and the practice of extensive reading should be integrated within a single methodological system. Prediction is therefore best understood not as an optional strategy but as an indispensable, central component of reading comprehension whose explicit and systematic development is a priority task of foreign-language reading instruction. Future research should examine, experimentally, how specific prediction-focused techniques within extensive-reading programmes affect the comprehension, reading rate and autonomy of university EFL learners.

Practical recommendations

1. **Treat prediction as a core skill, not an add-on.** Build prediction systematically into the reading syllabus and make it an explicit learning objective rather than an incidental by-product of reading [24], [26].
2. **Prioritise the pre-reading stage.** Activate background knowledge and elicit expectations from the title, key words, cover and illustrations before reading, using brainstorming and pre-text discussion [26].
3. **Train the full prediction cycle.** Move learners through predicting, reading, testing and confirming (Goodman's model) so that hypothesis formation and revision become habitual [1].
4. **Integrate prediction with extensive reading.** Use large quantities of accessible, self-selected texts to build the schematic and lexical base of prediction, and employ low-burden predict–read–confirm techniques that do not disrupt pleasure reading [3], [16].
5. **Develop linguistic (lexical) prediction.** Teach learners to guess unknown-word meaning from context, word-formation and cognates, following a systematic guess-and-verify procedure [21], [24].
6. **Increase language experience to overcome RAGE.** Since limited exposure, not qualitative deficit, mainly explains weaker L2 prediction, maximise comprehensible input through regular reading [12], [29].
7. **Encourage tolerance of ambiguity and intelligent guessing.** Foster the "good language learner" behaviours of using contextual cues and continuing without understanding every word [17], [20].
8. **Make prediction visible and measurable.** Use simple instruments - prediction logs, "what happens next?" prompts and self-rating of prediction accuracy - so that learners can monitor their own hypothesis formation and teachers can track the growth of the skill over time [18], [26]. Rendering prediction observable transforms it from an implicit process into an object of conscious learning and self-assessment, which supports both motivation and the transfer of the skill to new texts.

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