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SPEECH DELAY AND HIDDEN COGNITIVE STRENGTHS IN FL LEARNING

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Abstract. Speech delay is commonly treated as a stable and universal developmental deficit, assumed to manifest consistently across linguistic contexts. However, emerging research in bilingualism, psycholinguistics, and neurocognition suggests that language processing is highly sensitive to structural, cognitive, and sociocultural variables. This article explores the hypothesis that speech delay may not be universal but language-specific, and that its visibility can vary across different linguistic systems. Drawing on theoretical perspectives from bilingual language activation, executive function research, competence - performance distinction, and sociocultural theory, the paper examines how foreign language learning may reduce observable speech difficulties and reveal latent cognitive or metalinguistic strengths. The analysis integrates insights from bilingual cognition studies and inclusive education frameworks to argue that foreign language instruction can function as a compensatory and diagnostic resource rather than an additional burden for children diagnosed with speech delay. Reconsidering speech delay through a cross-linguistic lens has significant implications for assessment practices, educational policy, and strength-based pedagogical approaches. The study calls for more dynamic and multilingual-sensitive models of evaluation within inclusive educational contexts.

Key words: Speech delay, language-specific processing, bilingualism, foreign language learning, cognitive strengths, inclusive education.

Introduction

Speech delay has traditionally been conceptualized as a universal developmental deficit, assumed to manifest consistently across all linguistic contexts. Within monolingual diagnostic frameworks, children identified with speech delay are often evaluated exclusively through the lens of their first or dominant language, and their linguistic difficulties are interpreted as stable indicators of limited communicative or cognitive capacity. However, growing evidence from bilingualism, psycholinguistics, and neuroeducation challenges this assumption, suggesting that speech development is highly sensitive to linguistic structure, cognitive load, and sociocultural context.

In multilingual and multilingual-adjacent educational environments, an increasing number of practitioners report a paradoxical phenomenon: children diagnosed with speech delay in their native language may demonstrate noticeably stronger performance when exposed to a foreign language, particularly in structured instructional settings. In such cases, speech difficulties appear reduced, reorganized, or qualitatively different, and in some instances, learners display heightened metalinguistic awareness, rapid pattern recognition, or advanced receptive skills. These observations raise a fundamental research question: Is speech delay a universal cognitive limitation, or can it be a language-specific processing difficulty whose visibility depends on the linguistic system being used? [1]

Research on bilingualism has long emphasized that languages within an individual do not function as isolated systems. According to François Grosjean, bilingual speakers are not equivalent to two monolinguals in one person; rather, their languages interact dynamically, with each language being activated to varying degrees depending on context, task demands, and communicative goals. This perspective undermines monolithic views of language competence and suggests that linguistic performance may fluctuate across languages without reflecting a global deficit. From this standpoint, speech delay observed in one language does not necessarily predict equivalent difficulties in another.

Furthermore, studies in cognitive development demonstrate that bilingual and foreign language learning contexts can foster enhanced executive control, attentional flexibility, and metalinguistic awareness. Research by Ellen Bialystok indicates that managing multiple linguistic systems strengthens cognitive control mechanisms, even when expressive language abilities lag behind age norms.

This distinction is crucial, as it suggests that speech delay may coexist with intact or even enhanced cognitive processing capacities. In such cases, expressive limitations may mask underlying strengths that become more visible when learners engage with a new linguistic system that imposes different structural and social demands [2].

Neurocognitive approaches further support the notion that language-specific characteristics influence speech production and processing. Neuroimaging and behavioral studies conducted by Viorica Marian demonstrate that multiple languages are simultaneously active in the bilingual brain, even when only one language is in use. This parallel activation implies that switching to a foreign language may engage alternative neural pathways or redistribute cognitive resources in ways that reduce the salience of speech difficulties. For children whose native language presents complex morphological systems, dense inflectional paradigms, or high phonological load, a structurally different foreign language may offer a cognitively less burdensome entry point into verbal expression.

The distinction between linguistic competence and linguistic performance also plays a critical role in reinterpreting speech delay. As articulated in generative linguistic theory by Noam Chomsky, an individual's underlying knowledge of language structure (competence) may not be fully reflected in observable speech output (performance), particularly under conditions of stress, time pressure, or negative evaluative experiences. Children with speech delay are frequently exposed to repeated correction, comparison, and failure within their native language environment, which may further inhibit expressive performance. A foreign language learning context, by contrast, often represents a "neutral" communicative space where expectations are reset and prior negative linguistic experiences exert less influence [3].

From a sociocultural perspective, language is not merely a tool for communication but a primary mediator of cognitive development. Lev Vygotsky emphasized that learning occurs through interaction within culturally structured systems of meaning. When children encounter a new language, they also encounter new interactional norms, instructional strategies, and social roles. For learners with speech delay, this shift may reduce affective barriers, lower anxiety, and create conditions under which cognitive strengths can emerge more clearly. In this sense, foreign language learning may function not as an additional burden, but as a compensatory or facilitative mechanism.

Despite these theoretical advances, educational and clinical assessment practices remain largely monolingual and deficit-oriented. Diagnostic procedures for speech delay typically prioritize error counting, norm-referenced benchmarks, and static testing within a single language. Scholars such as Elizabeth Peña have argued for dynamic assessment approaches that evaluate learning potential rather than surface-level accuracy, particularly in linguistically diverse populations. Failure to adopt such perspectives risks misidentifying language difference as language disorder and overlooking children whose abilities do not conform to monolingual norms.

Within the framework of inclusive education, these concerns acquire particular urgency [4].

If speech delay is assumed to be universal and immutable, children may be excluded from foreign language instruction under the assumption that additional languages will exacerbate their difficulties. However, if speech delay is reconceptualized as a language-specific phenomenon, foreign language learning may instead represent an opportunity to support linguistic development, enhance self-efficacy, and reveal hidden cognitive strengths. This shift has profound implications for educational policy, classroom practice, and teacher training.

The present article seeks to contribute to this emerging discourse by examining speech delay through a cross-linguistic and cognitive lens. Rather than treating speech delay as a uniform deficit, the study explores the possibility that its manifestation varies across linguistic systems and that foreign language learning can alter its visibility. By integrating insights from bilingualism research, neurocognitive studies, and sociocultural theory, this paper argues for a more nuanced understanding

of speech delay - one that recognizes linguistic diversity as a potential resource rather than a risk factor.

Ultimately, addressing the question “Is speech delay universal?” requires moving beyond monolingual assumptions and embracing the complexity of human language processing. Recognizing the language-specific nature of speech difficulties may not only improve diagnostic accuracy but also open new pathways for inclusive and strength-based educational practices [5].

Methodology

The present study adopts a qualitative exploratory research design aimed at examining whether speech delay manifests uniformly across linguistic systems or demonstrates language-specific variability. Given the conceptual and interdisciplinary nature of the research question, a qualitative approach was selected as the most appropriate means of capturing nuanced differences in linguistic performance, cognitive engagement, and learning behavior across languages. Rather than measuring speech delay as a fixed deficit, the study focuses on patterns of variation, contextual factors, and emergent strengths observed during foreign language learning.

This design aligns with contemporary perspectives in bilingualism research, which emphasize dynamic language use and context-sensitive performance over static, monolingual norms. [6]

Participants

The study involves a purposive sample of children aged 6 - 9 who have previously been identified with speech delay in their native language (Kazakh or Russian) by educational or speech-language professionals. All participants are enrolled in mainstream or inclusive educational settings and receive formal instruction in English as a foreign language.

The selection criteria include:

- an official or pedagogical identification of speech delay in the first language (L1);
- absence of diagnosed intellectual disability or severe neurological impairment;
- regular exposure to English in an instructional setting for a minimum of six months.

This sampling strategy allows for the examination of speech and cognitive behavior in children whose linguistic challenges are documented in one language but whose performance in a foreign language (L2) remains underexplored [7].

Data Collection Methods

Data were collected through multiple qualitative instruments to ensure triangulation and depth of analysis.

Classroom Observation

Structured and semi-structured observations were conducted during both L1-based activities and English language lessons. Particular attention was paid to:

-verbal participation;
-responsiveness to instructions;
-error patterns;
-use of compensatory strategies (gestures, reformulation, self-correction).

Comparative Language Tasks

Participants completed parallel tasks in their native language and in English, including:

-picture description;
-basic narrative construction;
-vocabulary recognition and categorization tasks.

The tasks were designed to be age-appropriate and cognitively comparable while respecting structural differences between languages.

Dynamic Assessment Elements

In contrast to traditional static testing, the study incorporated principles of dynamic assessment, drawing on the work of Elizabeth Peña. During tasks, mediated support, prompts, and feedback were provided to evaluate learners’ responsiveness to instruction, learning potential, and cognitive flexibility rather than error frequency alone.

Teacher and Specialist Interviews

Semi-structured interviews were conducted with English teachers and, where applicable, speech-language professionals. The interviews explored perceptions of the child's performance across languages, changes over time, and observed strengths not typically associated with speech delay.

Data Analysis

The collected data were analyzed using thematic analysis, following an inductive coding procedure. Transcripts from observations and interviews were coded for recurring themes, including:

- reduction or transformation of speech difficulties in L2;
- evidence of metalinguistic awareness;
- increased engagement or confidence in foreign language contexts;
- discrepancies between expressive limitations and receptive or cognitive abilities.

Cross-linguistic comparisons were conducted to identify patterns indicating whether speech delay appeared consistent or variable across languages. Rather than treating differences as anomalies, variability was interpreted as meaningful data reflecting language-specific processing demands.

Ethical Considerations

Ethical approval was obtained in accordance with institutional guidelines. Informed consent was secured from parents or guardians, and assent was obtained from child participants. All data were anonymized, and participants were assured that the study focused on learning processes rather than evaluative judgments. Care was taken to ensure that participation did not interfere with instructional time or contribute to additional pressure on the learners.

Methodological Limitations

As an exploratory qualitative study, the findings are not intended to be generalized to all children with speech delay. Instead, the study aims to generate theoretically informed insights and raise critical questions regarding monolingual diagnostic assumptions. Future research may extend this work through mixed-methods designs or longitudinal approaches. [8]

Results

The analysis revealed clear cross-linguistic variability in the manifestation of speech delay among participants. While all children had previously been identified with speech delay in their native language (L1), their performance in English as a foreign language (L2) demonstrated notable qualitative differences.

1. Reduced Expressive Anxiety in L2

During classroom observations, participants exhibited significantly lower levels of visible communicative anxiety in English lessons compared to native-language tasks. In L1 settings, children frequently hesitated, avoided extended utterances, or relied on minimal responses. In contrast, in English lessons they more readily attempted full sentences, participated in repetition-based activities, and demonstrated increased willingness to take risks in speech production.

This reduction in anxiety appeared to correlate with a decreased fear of error. Because English was perceived as a shared learning space where all students were "non-native," participants seemed less stigmatized by mistakes.

2. Structural Simplification and Performance Stability

In comparative narrative tasks, children's speech in L1 often reflected grammatical omissions, disrupted word order, or morphological inconsistency. However, in English tasks - particularly those involving formulaic sentence frames - speech production appeared more stable.

Although vocabulary range in L2 was naturally more limited, sentence construction frequently followed consistent patterns. This suggests that structural transparency and reduced morphological complexity may have facilitated more organized verbal output.

3. Emergence of Metalinguistic Awareness

Several participants demonstrated heightened sensitivity to patterns in English. They showed strong abilities in:

- identifying word categories,
- recognizing repetitive grammatical structures,
- correcting their own pronunciation after prompts.

Interestingly, in L1 contexts, similar metalinguistic reflection was rarely observed. This indicates that cognitive engagement with language rules may have been more visible in the foreign language setting.

4. Strong Receptive and Cognitive Skills

Dynamic assessment procedures revealed that many participants responded rapidly to mediated prompts in L2. When provided with scaffolding, they were able to:

- reformulate sentences,
- generalize grammatical patterns,
- transfer newly learned structures to novel contexts.

These findings suggest that expressive limitations in L1 did not necessarily reflect reduced learning potential. Instead, they may have masked intact or even strong cognitive processing abilities.

5. Teacher Perceptions

Interviews with English teachers indicated consistent observations of:

- unexpected participation,
- rapid memorization of vocabulary,
- strong auditory imitation skills,
- creative engagement during communicative tasks.

Several teachers reported surprise that students identified with speech delay were often among the most attentive or analytically engaged learners in English lessons [9].

Discussion

The findings of this study challenge the assumption that speech delay represents a universal and stable deficit across linguistic systems. Instead, the results support the hypothesis that speech delay may be language-specific in its manifestation, influenced by structural, cognitive, and sociocultural variables.

1. Speech Delay as Language-Specific Processing Difficulty

The variability observed between L1 and L2 performance aligns with theories of bilingual language activation described by François Grosjean, which emphasize context - dependent language functioning. The results suggest that speech delay may not reflect a global impairment but rather difficulty interacting with particular linguistic structures.

Languages differ significantly in morphological density, phonological complexity, and syntactic flexibility. If a child experiences processing overload in one system, a structurally different language may redistribute cognitive demands in ways that reduce observable breakdown.

2. Competence Versus Performance

The distinction between linguistic competence and performance, originally articulated by Noam Chomsky, provides a useful interpretive lens. The participants' ability to respond effectively under mediated conditions suggests that underlying competence may remain intact despite disrupted spontaneous performance in L1.

Foreign language learning environments may reduce performance pressure, thereby allowing latent competence to surface more clearly.

3. Cognitive Flexibility and Executive Control

The emergence of metalinguistic awareness and pattern recognition in L2 aligns with research on bilingual cognitive advantages, particularly studies by Ellen Bialystok. Managing a new linguistic code may activate executive control systems that are less visible in habitual language use.

Rather than increasing cognitive burden, structured foreign language learning may stimulate regulatory processes that support more organized speech production.

4. Sociocultural Mediation and Identity Reset

From a sociocultural perspective, the foreign language classroom can function as a psychologically neutral space. As emphasized in Lev Vygotsky, learning is mediated by social interaction and cultural framing. In L2 contexts, children may experience a symbolic "reset" of linguistic identity, free from prior experiences of correction or perceived inadequacy.

This affective shift may partially explain increased participation and risk-taking observed in English lessons.

5. Implications for Inclusive Education

These findings carry significant implications for inclusive educational practice. Excluding children with speech delay from foreign language instruction based on deficit assumptions may be counterproductive. Instead, foreign language learning may serve as:

-a diagnostic lens,

-a compensatory tool,

-a strength-revealing environment.

Assessment practices should therefore move beyond monolingual benchmarks and incorporate dynamic, cross-linguistic perspectives [10].

These findings are also consistent with contemporary pedagogical approaches emphasizing scaffolding and collaborative multilingual learning environments. Research conducted within the PUDP Scaffolding Project in Kazakhstan demonstrated that structured instructional support, interactive learning strategies, and communicative teaching methods significantly enhance learner engagement, confidence, and participation in English language education contexts. The study further highlights the importance of supportive educational frameworks that encourage active communication and reduce psychological barriers in language learning environments (Kurmambayeva & Dalmukhanova, 2023). Such findings reinforce the argument that foreign language instruction may function not only as an academic subject but also as a supportive and compensatory environment for learners with speech-related difficulties.

The study does not claim that speech delay disappears in a foreign language. Rather, it demonstrates that its visibility, intensity, and qualitative expression may vary across linguistic systems. This variability suggests that speech delay cannot be understood solely as a universal cognitive limitation. Instead, it may represent a complex interaction between linguistic structure, cognitive resources, and sociocultural context [11].

Reframing speech delay in this way shifts the narrative from deficit to potential, aligning with contemporary inclusive and strength-based educational paradigms.

Conclusion

This study examined the language-specific manifestation of speech delay and the potential for foreign language learning to reveal hidden cognitive and metalinguistic strengths. Findings indicate that children identified with speech delay in their native language may demonstrate reduced observable difficulties, increased metalinguistic awareness, and enhanced cognitive engagement in a structurally different foreign language. These results challenge the notion of speech delay as a universal and static deficit and highlight the need for cross-linguistic perspectives in both research and practice.

Recommendations arising from the study include:

Adopt language-specific diagnostic approaches: Practitioners should evaluate speech delay across multiple languages when applicable, rather than relying solely on L1 performance.

Integrate dynamic assessment methods: Focus on learning potential and responsiveness to mediation, rather than static error counts.

Provide foreign language exposure for children with speech delay: Structured foreign language instruction can serve as both a compensatory mechanism and an environment in which latent abilities may emerge.

Encourage interdisciplinary collaboration: Linguists, speech-language therapists, and educators should work together to design assessment and instructional strategies that reflect cross-linguistic variability.

Practical Implications for Teachers

Use flexible language activities: Provide sentence frames, visual support, and repetition to scaffold L2 production.

Observe metalinguistic engagement: Recognize signs of pattern recognition, grammatical awareness, and problem-solving as indicators of potential rather than error.

Reduce performance pressure: Create a supportive classroom environment where mistakes are normalized, particularly in foreign language settings.

Monitor cross-linguistic differences: Pay attention to differences between L1 and L2 performance to identify areas of hidden strength and potential.

Communicate with specialists: Share observations with speech-language therapists to refine individualized learning plans and avoid mislabeling students.

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ЗАДЕРЖКА РЕЧЕВОГО РАЗВИТИЯ И СКРЫТЫЕ КОГНИТИВНЫЕ СПОСОБНОСТИ В ИЗУЧЕНИИ ИНОСТРАННОГО ЯЗЫКА

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Аннотация. Задержка речевого развития традиционно рассматривается как устойчивый и универсальный дефицит развития, который, как предполагается, проявляется одинаково в различных языковых контекстах. Однако современные исследования в области билингвизма, психолингвистики и нейрокогнитивистики показывают, что языковая обработка в высокой степени зависит от структурных, когнитивных и социокультурных факторов. В данной статье рассматривается гипотеза о том, что задержка речевого развития может быть не универсальным, а языково-специфическим явлением, а степень её проявления способна варьироваться в разных языковых системах. Опираясь на теоретические подходы, связанные с активацией языков у билингвов, исследованиями исполнительных функций, разграничением языковой компетенции и речевой реализации, а также социокультурной теорией, статья анализирует, каким образом изучение иностранного языка может снижать выраженность наблюдаемых речевых трудностей и способствовать выявлению скрытых когнитивных или метаязыковых способностей. Анализ объединяет результаты исследований билингвального мышления и концепции инклюзивного образования, обосновывая, что обучение иностранному языку может выступать не дополнительной нагрузкой, а компенсаторным и

диагностическим ресурсом для детей с задержкой речевого развития. Переосмысление задержки речевого развития через призму межъязыкового подхода имеет важное значение для практики диагностики, образовательной политики и педагогических стратегий, ориентированных на сильные стороны ребёнка. Исследование подчёркивает необходимость разработки более динамичных и чувствительных к многоязычию моделей оценки в условиях инклюзивного образования.

Ключевые слова: задержка речевого развития, языково-специфическая обработка, билингвизм, изучение иностранного языка, когнитивные способности, инклюзивное образование.

СӨЙЛЕУ ДАМУЫНЫҢ КЕШЕУІЛДЕУІ ЖӘНЕ ШЕТЕЛ ТІЛІН ҮЙРЕНУДЕГІ ЖАСЫРЫН КОГНИТИВТІК ҚАБІЛЕТТЕР

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Аңдатпа. Сөйлеу тілінің дамуының кешеуілдеуі дәстүрлі түрде әртүрлі тілдік ортада бірдей көрінетін тұрақты әрі әмбебап даму тапшылығы ретінде қарастырылады. Алайда билингвизм, психолингвистика және нейрокогнитивистика салаларындағы заманауи зерттеулер тілдік өңдеудің құрылымдық, когнитивтік және әлеуметтік-мәдени факторларға жоғары деңгейде тәуелді екенін көрсетеді. Бұл мақалада сөйлеу тілінің дамуының кешеуілдеуі әмбебап емес, тілдік жүйеге тән құбылыс болуы мүмкін және оның көрінісі әртүрлі тілдік жүйелерде өзгеше байқалуы ықтимал деген гипотеза қарастырылады. Билингвтердің тілдік белсенділігі, атқарушы функцияларды зерттеу, тілдік құзыреттілік пен сөйлеу әрекетінің арақатынасы, сондай-ақ әлеуметтік-мәдени теориялар негізінде мақала шетел тілін меңгеру сөйлеудегі байқалатын қиындықтардың деңгейін төмендетіп, жасырын когнитивтік немесе метатілдік қабілеттердің ашылуына қалай ықпал ететінін талдайды. Зерттеу билингвалды когниция мен инклюзивті білім беру тұжырымдамаларын біріктіре отырып, шетел тілін оқыту сөйлеу тілінің дамуы кешеуілдеген балалар үшін қосымша жүктеме емес, керісінше компенсаторлық әрі диагностикалық ресурс бола алатынын негіздейді. Сөйлеу тілінің дамуының кешеуілдеуін тіларалық тұрғыдан қайта қарастыру диагностикалау тәжірибесі, білім беру саясаты және баланың күшті жақтарына бағытталған педагогикалық тәсілдер үшін маңызды мәнге ие. Зерттеу инклюзивті білім беру жағдайында көптілділікке сезімтал әрі икемді бағалау модельдерін әзірлеу қажеттігін көрсетеді.

Түйін сөздер:сөйлеу тілінің дамуының кешеуілдеуі, тілге тән өңдеу, билингвизм, шетел тілін меңгеру, когнитивтік қабілеттер, инклюзивті білім беру.