Bilingual Proficiency and Its Influence on Third Language Phonological Acquisition

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Annotation: *This article explores the influence of bilingual proficiency on third language (L3) phonological competence. Although bilingualism has been widely recognized as a facilitator in the learning of additional languages, especially in terms of cognitive flexibility and metalinguistic awareness, its specific effect on phonological acquisition remains inconclusive. Through a detailed review of comparative studies involving monolingual, bilingual, and multilingual learners, the article investigates whether higher levels of bilingual proficiency yield improved L3 phonological performance. It becomes evident that phonological acquisition – particularly in the perception and production of non-native sounds – may not benefit equally from bilingualism due to its reliance on auditory processing and articulatory mechanisms. These findings emphasize that bilingual advantages may be domain-specific, calling for a more nuanced and context-sensitive understanding of multilingual speech development.*

Keywords: *bilingualism, third language acquisition, phonological competence, multilingualism, perceptual discrimination, metalinguistic awareness, speech production.*

Двуязычная компетенция и её влияние на фонологическое освоение третьего языка

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Аннотация: *В данной статье исследуется влияние двуязычной компетенции на фонологическое освоение третьего языка (Я3). Несмотря на то, что двуязычие широко признано как фактор, способствующий изучению дополнительных языков, особенно в контексте когнитивной гибкости и метаязыкового осознания, его специфическое влияние на фонологическое освоение остаётся неопределённым. В статье проводится детальный обзор сравнительных исследований, включающих монолингвистичных, двуязычных и многоязычных учащихся, с целью выяснения, улучшает ли более высокий уровень двуязычной компетенции фонологическую эффективность при освоении третьего языка. Выясняется, что фонологическое освоение – особенно восприятие и производство неродных звуков – может не получать равного преимущества от двуязычия, поскольку оно зависит от слуховой обработки и артикуляторных механизмов. Эти выводы подчеркивают, что преимущества двуязычия могут быть специфичными для определённых областей, что требует более тонкого и контекстно чувствительного подхода к пониманию развития многоязычной речи.*

Ключевые слова: *двуязычие, освоение третьего языка, фонологическая компетенция, многоязычие, перцептивная дискриминация, метаязыковое осознание, производство речи.*

Ikki tillilik kompetensiyasi va uning uchinchi tilning fonologik o'zlashtirilishiga ta'siri

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Annotatsiya: *Ushbu maqola ikki tillilik kompetensiyasining uchinchi til (T3) fonologik kompetensiyasiga ta'sirini o'rganadi. Ikki tillilik, ayniqsa, kognitiv moslashuvchanlik va metatillik ongida qo'shimcha tillarni o'rganishda yordam beruvchi omil sifatida keng tan olingan bo'lsa-da, uning fonologik o'zlashtirishga bo'lgan aniq ta'siri hali ham noaniq qolmoqda. Monolingv, bilingv va polilingv o'quvchilari ishtirokidagi taqqoslash uchun o'tkazilgan tadqiqotlarini batafsil ko'rib chiqish orqali maqola ikki tillilik kompetensiyasining yuqori darajalari uchinchi til fonologik ko'rsatkichlarini yaxshilashga yordam beradimi yoki yo'qligini o'rganadi. Shuni aniqlash mumkinki, fonologik o'zlashtirish – ayniqsa, tug'ma bo'lmagan tovushlarni qabul qilish va ishlab chiqarish – ikki tillilikdan bir xilda foyda ko'rmasligi mumkin, chunki bu jarayon eshitish va artikulyatsion mexanizmlarga bog'liq. Ushbu xulosalar ikki tillilikning afzalliklari faqat ba'zi sohalarga xos bo'lishi mumkinligini ta'kidlaydi va ko'p tilli nutq rivojlanishini yanada nozik va kontekstga mos ravishda tushunishni talab qiladi.*

Kalit so'zlar: *ikki tillilik, uchinchi tilni o'zlashtirish, fonologik kompetensiya, ko'p tillilik, sezgir farqlash, metatillik ong, nutq ishlab chiqarish.*

Introduction

The global rise in multilingual education and mobility has intensified interest in third language acquisition (TLA), particularly in how prior linguistic experience affects subsequent language learning. While the cognitive and metalinguistic benefits of bilingualism are well-documented, the extent to which these benefits translate into third language (L3) phonological acquisition remains an open question. Phonological competence, a foundational component of language learning, includes accurate perception and production of phonemes – abilities essential for intelligibility and communicative effectiveness. Gallardo del Puerto's (2007) work provides critical insight into this issue by assessing whether differing levels of bilingual proficiency in Basque-Spanish bilingual students influence their phonological competence in English. This article builds on that study by placing it in the broader context of research on bilingual advantages, phonological processing, and cross-linguistic influence, while also addressing the limitations and broader implications of the findings.

Bilingualism has been consistently linked to enhanced cognitive flexibility, and executive control, all of which are considered beneficial for additional language learning (Bialystok et al., 2012; Cenoz, 2003). These advantages are especially prominent in environments where additive bilingualism occurs – that is, where the second language supplements rather than replaces the first. In such contexts, learners often demonstrate higher levels of academic achievement and language proficiency (Cummins, 1976, 1991). According to Cummins' threshold hypothesis, a certain level of bilingual competence must be reached before cognitive and linguistic benefits manifest. Furthermore, his interdependence hypothesis posits that language skills are transferable across languages, meaning that proficiency in L1 and L2 can facilitate L3 acquisition. These frameworks suggest that bilingual learners, particularly those with balanced proficiency, may be better positioned to acquire a third language.

Bilingual individuals often possess a heightened metalinguistic awareness. They have the ability to analyze and compare languages, recognizing similarities and differences between them. This metalinguistic awareness enables them to fine-tune their language skills, making them more attentive to linguistic details, such as pronunciation, intonation, and idiomatic expressions. Being bilingual in terms of linguistic competence provides individuals with an expanded vocabulary, a deeper understanding of grammar and syntax, and an enhanced metalinguistic awareness. These advantages contribute to their proficiency in multiple languages, allowing them to communicate effectively and express themselves precisely and nuance.

Researchers have observed that bilingual individuals often demonstrate superior performance compared to monolinguals in tasks related to language acquisition. This consistent trend has led to

the formulation of a new perspective, suggesting that acquiring two or more languages fosters enhanced metalinguistic awareness, which in turn supports the learning of additional languages (Thomas, 1988; Cenoz & Valencia, 1994; Schmidt, 1995; Herdina & Jessner, 2002; Melhorn, 2007).

Among the early proponents of this idea was Thomas (1988), who, in her study on the acquisition of French as a third language, compared English monolinguals and English-Spanish bilinguals. She found that bilingual participants demonstrated greater proficiency in French than the monolingual group did in their second language. Thomas attributed this advantage to bilinguals' heightened sensitivity to linguistic structures, which she argued enhances their ability to engage in tasks typically associated with formal language education.

Melhorn (2007) further elaborates on this advantage by explaining that individuals who have already learned a foreign language tend to develop more sophisticated metalinguistic skills. According to him, this experience equips learners with greater insight into the mechanisms of language learning, more effective strategies, and an additional linguistic framework for comparison. These factors, he argues, contribute to a more efficient and less labor-intensive process when acquiring subsequent languages.

Learners are generally aware that their first language possesses a distinct phonological structure and prosodic patterns compared to other languages. They may also recognize that many languages follow specific conventions linking sounds (phonemes) to written symbols (graphemes). Additionally, some students may already have familiarity with the International Phonetic Alphabet (IPA), which aids in representing sounds across languages.

It is also common for learners to possess foundational knowledge of phonological rules. They tend to be conscious of the characteristic phonetic traits of their native language, which often contribute to the perception of a foreign accent when speaking a new language. Moreover, many students have prior experience with producing unfamiliar sounds, which can facilitate the articulation of sounds in a second or third language.

Despite these general benefits, phonological competence presents a more complex picture. It involves both perception (the ability to distinguish between phonemic contrasts) and production (the physical articulation of sounds). These processes are influenced not only by cognitive and linguistic factors but also by neurobiological and motoric ones, which may be less responsive to the benefits conferred by bilingualism (Werker, 1986). In multilingual contexts, the acquisition of L3 phonology is subject to various influences, including cross-linguistic phonological transfer, typological proximity between known languages and the L3, and the learner's age and exposure. While bilingual learners might possess enhanced sensitivity to language systems, this does not guarantee superior performance in specific domains such as phonological discrimination.

Numerous studies affirm that bilinguals have an edge over monolinguals in L3 learning. Bild and Swain (1989) found that minority-language bilinguals demonstrated superior performance in French immersion programs. Likewise, studies in the Basque Country revealed that Basque-Spanish bilinguals achieved better outcomes in learning English as an L3 than their monolingual Spanish counterparts (Cenoz, 1991; Lasagabaster, 1998).

Studying and using two languages can have an impact on key elements of a third language, according to research on bilingual students. Young bilingual speakers' ability to transmit their information from one language to the other and in the executive function or self-control activities are two areas where bilingualism has a significant favourable impact. The existence of two linguistic systems was frequently blamed for developmental issues or delays in earlier viewpoints on the effects of bilingualism. Bilingualism may have advantages, according to recent research (Bain, 1975; Peal & Lambert, 1962; Ricciardelli, 1992; Torrance, Wu, Gowan, & Aliotti 1970) from scientists who work in a variety of fields, including education, psycholinguistics, psychology, speech and hearing sciences, and neural processes. Researchers have found that there are some striking differences between the cognitive systems of bilingual students and those of monolingual children. The basic

processes of cognitive and neural development may be impacted by learning, speaking, and using multiple languages; in turn, this may affect how those systems learn and represent information.

According to a BBC report (BBC, 2006), describing the advantages of being bilingual by linking the brain to muscles and by noting that learning language is an intellectual exercise, it is of utmost importance to investigate the implications of this phenomenon. As more research studies have identified the positive effects of bilingualism on various mental processes, such as acquisition, learning, and cognition (for example, see Cummins, 2000, for a full discussion), it is important to investigate these effects further. Given the strength of children who learn two or more languages from birth or who pick up a second language after mastering the first, it is vital to take into account one of the remarkable effects of bilingualism on the mental processes mentioned above, which is crucial for better language learning. The theory asserts that bilingualism has an impact on how well a person learns to pronounce English as a third language.

Language we use is a main part of "who we are." A significant aspect of who we are is shaped by the language or languages we speak. According to Deaux (2000) and Thornborrow (1999), our languages have an impact on our identities, particularly our social and ethnic identities. Language is a significant element linked to identity in a study of bilingual kids in a bilingual educational environment.

Language is a crucial component, according to Fought (2006), that helps people balance their numerous roles and features of identity. An essential component of identity is language, a characteristic that varies from person to person. This echoes Sapir's position from 1932, who claimed that each person's experience with group membership is unique. Language is similar in that each person's use of it and how it affects their sense of who they are.

According to Henry (2017), multilingual identity is not just an accumulation of language-specific identities. An individual may identify with more than one culture or language, holding multiple identities, according to Pavlenko and Lantolf's definition of identity as "a process of continuous change and permutation which is comprised of cultural identity, social role, and discursive voice". The complex trajectories of their individual experiences, affective and cognitive processes, self-knowledge, comprehension of their relationship with a target language community, as well as perceptions and attitudes resulting from using and learning multiple languages, all play a role in how multilinguals develop their identities (Aronin 2016). A person's interpretation of the input they receive, including language input, simultaneously shapes their multilingual identity (Edwards 2009). As a result, the foundation of multilingual individuals' multilingual identities are attitudes, which are defined as ideas and values that individuals attach to various characteristics of a language, such as sound systems, which situate multilinguals in contexts (Marx 2002; Ohara 2001). In order to identify with and become more like the social group that this linguistic variation represents, acceptance of and assimilation of linguistic markers of that variety, such as pronunciation traits, may follow positive social judgement of that variety. As signs of social group membership, pronunciation speech signals may refer to more than one linguistic variety (cf. Marx 2002).

Applied linguistics has mostly used psycholinguistic and sociolinguistic vantage points to study the identities of multilinguals. The former is interested in the internal processes of developing and comprehending a new self while learning and utilising multiple linguistic systems because "languages may create different, and sometimes incommensurable, worlds for their speakers who feel that their selves change with the shift in language". The sociolinguistic approach looks into how multilingual people perceive their places in the world based on their interactions and experiences with other multilingual people from different contexts and periods of time.

The issue of whether multilinguals experience themselves as different when switching languages is addressed by Pavlenko (2006) within the context of the psycholinguistic perspective. The majority of participants in her study (65%) gave yes answers, and four separate factors were identified as the causes of this phenomenon: linguistic and cultural diversity, unique learning environments, varying degrees of emotionality in language use, and varying degrees of

language proficiency. Multilingual experiences involved various emotional valences attributed to many languages. For instance, languages that were learned early in life were described as being more real or natural, whereas those that were learned later in life were described as being more artificial or performative. According to Pavlenko (2006), these differences in emotionality and linguistic ability may have an impact on how various selves are seen.

In more recent studies, it has been acknowledged that the relationship between pronunciation and identity is influenced by L2 learners' opinions towards the pronunciation of a third language (e.g., Georgountzou and Tsantila 2017; Pullen 2012; Tokumoto and Shibata 2011; Zahoor and Kausar)

Applied linguists have increased their interest in comprehending the particulars of multilingual identity in light of the premise (Pavlenko 2006; Pavlenko and Blackledge 2004) that learning one or more languages and their subsystems entails creating a new self-based on "subjective realities such as perceptions, attitudes, and values". The way people see their place in the world, which is constantly changing in both location and time (Block 2007), shapes both monolinguals and multilinguals' identities (Norton 2013). Therefore, one's identity can be influenced by how they perceive themselves and the world, as well as by how they and others position themselves in different linguistic, social, and cultural settings. According to Morgan and Clarke (2011), identity is more particularly molded by people's ways of thinking and seeing their environments as well as the communicative resources, such as discourses, to which they are exposed. Target language, L1 sociocultural background, and level of consciousness of belonging to a sociocultural community or communities are the three elements of identity listed by Fiedler (2011). The concept of identity can thus be viewed through a variety of lenses, such as the subjective perception of one's relationship to newly learned foreign or second languages (Block 2013) and the extent to which people conform to or deviate from linguistic, social, and cultural settings and their communicative resources. Language attitudes of learners may reflect these cognitions (Tokumoto and Shibata 2011).

Pronunciation has been significantly related with identity and seen as most important for self-representation among all linguistic features acquired by foreign or second language learners (Guiora et al. 1972; Hansen Edwards 2008). An accent reveals "an honest signal of group membership" (Chakraborty 2017), whether it is social (Lybeck 2002; Thompson 1976), gender (Ohara 2001), or ethnic (Gatbonton 1975). An L2 speaker's pronunciation influences how they are perceived by themselves and others (Celce-Murcia et al. 2010). Research in both monolingual (Eckert 2000; Zhang 2005) and multilingual contexts (Gatbonton et al. 2011; Lybeck 2002; Marx 2002; Thompson 1976) has shown that people who strongly identify with a particular group or an ideology represented by this group adopt the particular phonetic features of this group. According to a sociolinguistic perspective (Campbell-Kibler 2010), an individual's interpretation of the sociolinguistic environment and the meanings assigned to its components, as well as their placement within it, determine how well a language or its pronunciation is received by others (Eckert 2008). According to Marx (2002), L2 learners who have a favourable opinion of the target language group of speakers who use a certain pronunciation variety are more inclined to identify with this group by, among other things, using the phonetic elements (speech markers) of this group in their speech.

However, the advantage is not uniform across linguistic domains. When it comes to phonological perception and production, results have been mixed. Davine et al. (1971) and Lambert and Macnamara (1969) reported that bilinguals performed only marginally better than monolinguals in discriminating non-native phonemes, with differences failing to reach statistical significance. This suggests that while bilingualism may enhance general language learning capabilities, its impact on phonology requires further scrutiny. Other studies shift the focus from monolingual-bilingual comparisons to differences within bilingual populations. Factors such as the context of L1 and L2 acquisition, literacy levels in both languages, and typological distance from the target language significantly affect L3 outcomes (Swain et al., 1990; Thomas, 1985, 1988). Gallardo del Puerto's (2007) study contributes to this intra-bilingual inquiry by comparing more balanced and less balanced bilinguals based on their use of Basque – a minority language in Spain. This distinction allowed for

the examination of whether higher bilingual proficiency correlates with improved phonological competence in English, an unrelated L3. The study employed a carefully controlled design involving 60 Basque-Spanish bilingual students. Participants were grouped based on a Basque use index derived from self-reported language use in different social contexts. Both groups were matched for age, English instruction exposure, and absence of extracurricular English experience. Phonological competence was assessed using an auditory discrimination test featuring minimal pairs of English vowels and consonants. The tasks targeted phonemes known to be difficult for Basque-Spanish learners and were administered in a classroom setting with visual aids to reduce orthographic interference. Statistical analyses (t-tests) revealed no significant differences between groups in overall, vowel-specific, or consonant-specific performance. The findings challenge the assumption that higher levels of bilingual proficiency automatically enhance L3 phonological competence. Despite expectations rooted in the threshold and interdependence hypotheses, the more balanced bilingual group did not outperform their less balanced peers. One plausible explanation lies in the nature of phonological acquisition itself. Unlike grammar or vocabulary, phonology may not benefit substantially from the cognitive and metalinguistic advantages typically associated with bilingualism. Instead, it may be more closely tied to perceptual acuity and articulatory accuracy, which are shaped by early language experience and biological factors rather than bilingual proficiency per se.

Additionally, the phonological similarity between Spanish and Basque may have limited the diversity of the learners' phonetic repertoire, thereby reducing potential transfer benefits to English. In other domains of language where Basque and Spanish differ more significantly – such as syntax or morphology – bilingual advantages might be more evident. Educational context also matters. Gallardo del Puerto's (2007) participants attended the same school and shared the same English instruction, potentially homogenizing exposure and outcomes. In contrast, studies where bilingual learners were educated in separate streams or environments have shown clearer distinctions in L3 outcomes (Sagasta, 2001).

While bilingualism is generally beneficial for third language acquisition, its effects are not uniform across linguistic domains. Gallardo del Puerto's (2007) findings suggest that phonological competence in an L3, particularly as measured through perception tasks, may not significantly benefit from higher levels of bilingual proficiency. This observation aligns with other research indicating that specific language skills – such as phoneme discrimination – are influenced more by perceptual and articulatory factors than by cognitive or metalinguistic ones.

These findings have pedagogical implications. Language educators should be cautious in assuming that bilingual learners will automatically excel in all aspects of an additional language. Tailored phonological training may be necessary even for advanced bilinguals. Future research should explore longitudinal changes in L3 pronunciation, the role of production-based measures, and potential interactions between age, instruction, and cross-linguistic phonological transfer.

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