

Language Transfer and its Educational Implications

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Introduction

Attempting to understand the cognitive relationship between languages in a bilingual, researchers have explored the positive and negative effects of one's first language development on second language acquisition. This phenomenon is called cross-linguistic transfer. Most often, transfer is investigated through a unilateral lens with researchers investigating how second language learners rely on and use their knowledge of their native language to better understand and use a second language. More recently, research has investigated 'opposite' transfer, or the effect one's L2 has on their use and understanding of their L1. The bidirectional transfer of linguistic knowledge is just beginning to be exploited as a teaching tool. These research findings have serious implications when considering which type of educational environment is most beneficial for young bilinguals.

Theoretical Framework

Cross-linguistic transfer must be understood according to the Common Underlying Proficiency model of bilingualism established by James Cummins (1980a, 1981a). This model asserts that one central processing system exists and can be expressed through different languages. There is one source of thought that can be expressed in different ways. This pathway of information functions the other way, too. Information can be learned in either language and retained because the same central engine processes it all (Baker 2011). Having this understanding of language acquisition and production establishes the existence of transfer.

The Developmental Interdependence Hypothesis as defined by Cummins (1979) also provides theoretical framework for this investigation. This hypothesis

suggests that a child's L2 competence is in part dependent on the child's competence in their L1. He argues that L2 learners' "cognitive resources clearly play a central role in the rapidity and ultimate success with which that [second] language is acquired" (Cummins 1991: 70). His research explains that a child participating in an immersion program (which entails intense L2 levels used in school) that also receives abundant vocabulary and concept support outside of school will gain high levels of L2 competence with no negative effects to their L1. However, a child that lacks a high level of competence in their L1 when exposed to an L2 will have lower L2 competence levels. In layman's terms, a child with good control of their native language will have similar success with a second language.

Metalinguistic awareness is the ability to treat language "as an object of thought, as opposed to simply using the language system to comprehend and produce sentences" (Tunmer & Herriman, 1984: 12). Being able to talk about words and sentences and understanding that the shape of a letter has nothing to do with its sound are examples of metalinguistic awareness. The transfer of certain metalinguistic tools from one language to another can facilitate better L2 learning. For example, the relationship between subjects and their correct verb tense learned in L1 does not have to be relearned in terms of the L2. Metalinguistic awareness is developed as a cognitive tool for understanding language. Transferring one's metalinguistic knowledge between languages helps facilitate biliteracy by fostering a heightened analytical awareness of language.

In the area of language acquisition research, there exists a distinction between competence in conversational settings and that required to succeed in

academically related exchanges. As explained in Baker (2011), understanding in exchanges involving basic interpersonal communicative skills, or BICS, is achieved with gestures and contextual clues supporting language. Areas of academia require higher thinking skills thus better ability to express abstract thought. This is called cognitive/academic language proficiency, or CALP. Language learners achieve these proficiencies at different rates. BICS develops quicker than CALP. The data provided in this paper focuses on written expression, analyzing examples of positive transfer in academic language. Proposed further research includes identifying possible differences between transfer in academic language and transfer in conversation.

Areas of Transfer

Determining aspects of language affected by cross-linguistic transfer can be difficult to understand. How can one determine the influence of one language on another? What are examples of observable cross-linguistic transfer? In their study of bidirectional transfer, Pavlenko and Jarvis (2000) establish certain aspects of language that differ according to specific languages, for example, selection among structural alternatives for expressing a message. In Spanish, directionality is encoded in the verb 'to enter' (entrar). In English, prepositions are employed to express direction (to go into). Although both options are available in both languages, the speaker decides which linguistic frame is more appropriate in a certain language context.

Positive and Negative Transfer

Arguments are made both in advocacy and in protest of the potential benefits transfer can offer a bilingual learner. Therefore a distinction exists between cross-linguistic transfer that benefits language acquisition- positive transfer- and that which may hinder L2 acquisition-negative transfer. This paper concentrates on positive transfer effects. Further research evaluating the impact of negative transfer is suggested.

L1 Transfer to L2

There are both positive and negative transfers of L1 knowledge to an L2. Students that develop strong cognitive and linguistic skills in their L1 will be able to transfer those skills into their L2. Many questions surround the topic of bilingual education for children. Will learning a second language negatively affect the child's abilities in their first language? Will the second language replace the first? Will the child's native language development be delayed and/or compromised by the introduction of a second language? Attempts to answer some of these questions call investigators to examine student's levels of L1 competence at the beginning of their introduction to the L2. Results correlated high levels of L1 competence to better success in the L2. Students whose native tongue had stopped developing before reaching mature abstract levels "remain on a lower level of educational capacity than they would originally have been able to achieve" (Cummins 1979, p 235). This suggests that positive L1 transfer occurs when the L1 reaches a certain level of development.

L2 Transfer to L1

Researchers have observed that an L2 user's brain differs from that of a monolingual in terms of their first language. For example, a native speaker of English that also speaks French has a different understanding of English than their monolingual counterpart. Research investigating L2 transfer on the L1 is sometimes referred to as 'reverse transfer.' In her study of Russian narratives, Aneta Pavlenko (2003) found many elements of English that were expressed in Russian. Examples of transferred elements include words, phrases, and grammatical structures. Literal translations of L2 phrases that do not exist in the L1 are examples of reverse transfer.

In her 1999 publication, Kathleen Broussard asserts the ability of “Developmental influences from the incompletely and imperfectly acquired second language [to] [...] affect the developing interlanguage system” (p. iii). Her study evaluated grammatical errors in compositions written by elementary students in a transitional bilingual education program. She compared the essays to those written by mainstream students of the same grade at the same school. There were six writing samples per grade level, collected in succession during the school year. She distinguished errors between transfer errors produced by the bilingual students influenced by their L1 language system; and common developmental errors made by the mainstream students. Third grade students (the youngest age group) had the highest number of transfer errors, which steadily decreased until fifth grade (the oldest age group). Transfer errors also correlated with specific writing samples, decreasing in number relative to the progression of sample. By the last writing

sample in fifth grade, the bilingual students' errors were similar to those of their mainstream counterparts- they had expunged their L1 language system-influenced transfer errors and were instead making the same errors (deemed developmentally appropriate) as the mainstream students.

Broussard concluded that bilingual students utilized 'transfer strategies' when lacking the ability to articulate an idea in their L2. Different L1 transfer strategies used by the bilingual students were identified in the compositions. One strategy concerns syntax. Syntax transfer involves the application of structures and constructions of Spanish writing to their compositions in English. This is evidence of a strong desire for L2 accuracy without the adequately developed grammatical competence to produce it. For example, one bilingual student's sentence finishes, "and a ring hot boiled them". Correct English would read, 'and a hot ring boiled them.' Spanish adjectives follow the noun, thus the student transferred the rule when writing in their L2. By the end of the fifth writing sample for the fifth grade class (the most advanced level), the students' increased English grammatical competence allowed them to abandon this transfer strategy, as it was no longer imperative to their production of written English. L1 support helped the students reach a similar competency level in their L2.

Her study confirms that "...[transfer] plays a significant role in the development of second language composition skills" (Broussard, 1999: iv). The data also shows how L2 acquisition continues to shape their existing cognitive language structure. The students showed continual development of their language system- in both Spanish and English- over the course of three years. This study

helps prove that one's cognitive language system is not a static quantity but one susceptible to change. English did not replace their L1; their L2 acquisition helped shape their language system.

Bidirectional Transfer

While most research focuses on unilateral transfer, Pavlenko and Jarvis (2000) collected evidence of bidirectional transfer. They compared prompted narratives of bilingual Russian/English speakers to those of monolingual Russian and monolingual English speakers. Their evidence exhibits L1 (Russian) influence on the narratives told in English and L2 (English) influence on the narratives told in Russian.

The study found evidence of bidirectional framing transfer. Framing transfer is defined as "transfer involving the choice of a linguistic frame (i.e. structural category or grammatical class) for expressing a mental representation" (Pavlenko & Jarvis 2000: 200). In this study, bidirectional, cross-linguistic influence was observed in references to emotional states. In English, emotions are expressed using adjectives whilst in Russian emotions are expressed through verbs. Although both structures exist in both languages, one is more conventionally used than the other. Observing English verbs used to describe emotions would be evidence for L1 transfer. Observing emotions being described with adjectives in Russian would be evidence for L2 transfer.

One example of L1-based framing transfer is the English sentence 'She had some personal emotions.' A monolingual English speaker would most likely construct this expression 'She was upset' using an adjective to describe her state.

Referring to the emotion as a noun ('personal emotions') is evidence of the speaker's L1 understanding of framing emotions.

There was also observable L2-based framing transfer involving emotions. One Russian respondent used the phrase 'vygliadela kak-budto ona byla zla na kogo-to' (looked as if she were angry at someone). The verb 'vygliadet' in Russian means 'to look' and was used to imitate an English construction of emotion 'to look angry.' However, this construction does not commonly exist in Russian and thus provides evidence of transferring an English phrase construction into Russian.

Educational Implications

As Broussard (1999) concluded, "Teaching transfer strategies to bilingual students could [...] be useful in helping them reach target language norms." At the start of formal schooling, all students (mainstream or bilingual) must begin to develop CALP. So while "writing development in bilingual and mainstream students in the elementary grades follows a similar developmental course [...] Transfer plays a significant role in the writing development of bilingual students" (Broussard, 1999, p. 125). Allowing students to strategically transfer elements of their L1 into their L2 production will encourage the limited use of known L2 elements without losing meaning. It also fosters the development of the interlanguage system as characterized by multiple grammatical systems.

Promoting code switching (not to be confused with the lexical transfer error of direct translation) also helps develop the interlanguage system. It can allow for greater meaning to be produced when no direct translation exists that successfully conveys an idea. Language is part of one's personal and social identity. Code

switching can allow students opportunities to express themselves unbounded by the restrictions of one language. Encouraging students to integrate their native or recently acquired second language into their writing allows them to express and discover their personal identity. A proposed lesson plan is to write poetry with one line in another language. Students must understand the grammatical and contextual structures of both languages so that the poem makes sense. Code switching can also celebrate identity by using one (albeit complex) interlanguage system to extend the expression of an idea across multiple identities.

Broussard's article demonstrates the incredible ability of bilingual students to create their own 'transfer strategies' to help them write in their second language. The strategies lasted only long enough to close the English competency gap between bilingual and mainstream students. Encouraging the production and use of these strategies could be beneficial for all types of bilingual programs. Rather than ignore their native language proficiency, it should be exploited.

Developing student's metalinguistic awareness of their native language will help them draw conclusions about and make connections with their second language. This is important in creating an additive bilingualism context because it ensures that the language system being acquired is not replacing the existing system. Students will be able to note both similarities and differences between the two languages. This can lead to better problem solving skills when constructing sentences.

Conclusion

There are positive and negative effects of transfer. By exploiting the positive effects in the classroom and being aware of the possible setbacks caused by transfer teachers can better understand the abilities and needs of their students. This paper concentrates on beneficial linguistic transfer between languages. Further research could weigh the benefits against the cost of negative transfer.

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