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JOANNA BORATYŃSKA-SUMARA
State Higher Vocational School in Tarnow
jboratynska@poczta.okay.pl

LEXICAL TRANSFER RESEARCH IN THIRD LANGUAGE ACQUISITION (TLA) – AN OVERVIEW

Keywords: cross linguistic influence, lexical transfer, native language, first foreign language (L2), second foreign language (L3)

Abstract

The article will review the most relevant research conducted on lexical transfer as a psycholinguistic phenomenon in tertiary language production at the level of the individual. The main purpose is to present the diversity of the experiments and to compare them as regards to the different aspects of Cross Linguistic Influence (CLI) being examined, the approaches to data collection their authors represent, the kinds of trilingual subjects they are concerned with, the parameters of the participants and the outcomes of the studies.

INTRODUCTION

In the words of Jarvis and Pavlenko (2008: 73) the assumption of the mental interconnectedness of words consequently means that the knowledge of words in one language may influence how words in another language are processed and produced. In order to avoid confusion concerning how different types of CLI relate to one another as the first criterion of distinction of their very comprehensive classification, Jarvis and Pavlenko (2008: 20–25) mention – *area of language knowledge or use and distinguish among phonological, orthographic, lexical, semantic, morphological, syntactic, discursive, pragmatic, and sociolinguistic transfer.* In my paper I am concerned with lexical transfer and it must be said that generally the CLI between non-native languages in a European context has been shown to occur primarily in lexis and the reason for such a preference is particularly its visibility and great richness of lexical items in comparison to grammatical structures (Ringbom 1987). The subject of

my analysis are ten of the most relevant studies examining lexical transfer, namely those of: Ringbom (1987, 2001, 2007), Dewaele (1998), Hammarberg (2001, 2009), Dentler (2000), Cenoz (2001), Ecke, Hall (2000), Ecke (2001), De Angelis, Selinker (2001), De Angelis (2005), Gabryś-Barker (2005, 2006), Odlin, Jarvis (2004).

Lexical transfer research in TLA – a classification

1. CLI characterised across the dimensions: Directionality, Intentionality, Mode, Outcome, Channel.

Apart from the area of language knowledge in their classification, Jarvis and Pavlenko (2008: 20–25) propose characterising every instance of transfer across nine additional dimensions (three of them: *type of language knowledge* – implicit versus explicit, *form*: verbal versus non-verbal performance, and *manifestation*: overt versus covert types of CLI, have not been investigated empirically in TLA research). On the other hand, they explicitly underline that in most cases it is not necessary to identify every single example of transfer from all perspectives. Another dimension given by Jarvis and Pavlenko can be characterised by *directionality*. A *forward transfer* is, logically a transfer from L1 to L2 or L2 to L3, and the *reverse transfer* is a transfer from L3 to L2 or L2 to L1. As such a categorisation only applies to the order of acquisition and does not emphasise other relevant factors and the L1's unique status, the authors also propose the term *lateral transfer* covering examples of CLI between "post-L1 languages whose status is problematic or irrelevant" (Jarvis, Pavlenko 2008: 22). A *bi- or multidirectional transfer* can be applied to languages that perform the function of both source and recipient languages simultaneously (Jarvis, Pavlenko 2008: 22). It can be said that all the mentioned researchers examined the influence of the mother tongue on the second foreign language and the influence of the first foreign language on the second foreign language (forward transfer/lateral transfer).

As far as *intentionality* is concerned, it seems that identifying *intentional transfer* with CLI as a conscious communicative strategy and *unintentional transfer* with making interlingual mental associations and identifications, is a simplification of a very complex phenomenon. For this reason lexical transfer in TLA seems not to have been examined from the perspective of intentionality (Jarvis, Pavlenko 2008: 24). It is only Hammarberg and Williams (Hammarberg 2001) who, in their examination of different functions of non-adapted language switches, distinguish between switches with a pragmatic purpose and those without an identified pragmatic purpose (so called WIPPs), although they do not use explicitly the terms intentional or unintentional.

Examining transfer cases from the perspective of whether the *outcome* is *positive* or *negative* applies mainly to the traditional distinction between *transfer in production*, when similarities resulting from language relatedness may cause the violation of grammatical norms, and *transfer in reception*, when the close language

typology resulting in significant synergies between two languages leads to a positive transfer. It must be emphasised that research on lexical transfer in TLA has focused on transfer in production. Dealing with transfer in production, the authors of the experiments mentioned represent a more recent approach and examine the effects of CLI without regard for whether the result is positive or negative taking into account that violating grammatical norms is not the only indicator of perceiving an instance of transfer as being negative. An error may be also the outcome of the mental interlingual process of the identification of similarities, which could reflect a highly developed metalinguistic awareness and lead to success in communication when, although wrong or inappropriate, it is still comprehensible..

Another dimension transfer that can be characterised is the distinction between *transfer that involves speech* versus *transfer that involves writing* (*channel: aural versus visual*). According to Ringbom (1987: 128), "limited control in speech situations causes CLI to occur more often in speech than in writing", which would suggest that it is mainly lexical transfer in oral production that researchers deal with. From the studies mentioned, the experiments of Ringbom (2001), De Angelis (2005) and Ecke (2001) focus on written production. Oral production is the focus of Dewaele (1998) and Cenoz (2001), as well as De Angelis and Selinker (2001) and Hammarberg (2001, 2009), who conducted longitudinal case studies, and thus the choice of the aural channel was a result of the intersubjective approach to data collection. Dentler (2000) combines written with oral production and Gabryś-Barker (2006) examines written production (translation) with oral thinking aloud protocols.

2. Linguistic Transfer as the main area of research

One of the dimensions proposed by Jarvis and Pavlenko (2008) refers to the distinction between *linguistic transfer* related to linguistic forms and structures, and *conceptual transfer* related to mental concepts which underlie those forms (Jarvis, Pavlenko 2008: 61). With respect to lexical transfer in TLA it is, in the words of Jarvis and Pavlenko (2008: 73–74), linguistic transfer with a focus on three dimensions (see a classification of Ringbom 1987: 37) that has received most of the attention of researchers; namely, the ability to access a word in one's mental lexicon (language activation), knowledge of how the word is pronounced and spelled in its various forms (morphophonology), and semantics: knowledge of the meaning(s) of the word, the word combinations in which it conventionally occurs (collocations) and the word's associations with other words and notions. It must be emphasised that all the three dimensions are strictly connected as the investigation of language activation processes is performed from the perspective of the occurrence of formal and semantic interference. In the literature, morphophonological errors are called *formal transfer* and include the use of a false cognate, lexical borrowings or lexical inventions, and *semantic transfer* can be characterised as the use of a target language word with a meaning that reflects the influence from the semantic of a corresponding word in another language (Ringbom 2001: 64). In his comprehensive studies on lexical transfer in TLA, Ringbom (1987: 117, 2001) is mainly concerned

with the distinction between *transfer of form* and *transfer of meaning*. He divides lexical transfer instances in two main categories: *borrowings* with the subcategories: language switches or complete language shifts and language coinages (hybrids, blends, relexifications), and, as the second category, *lexical transfer* instances with the subcategories: totally or partially deceptive cognates, false friends (all the above listed examples show transfer of form) and subcategories that illustrate the transfer of meaning: semantic extensions of single lexical units, loan translations and calques of multi-words units.

Referring to the classification of Ringbom, Dentler (2000) divides the observed transfer errors into four groups: borrowings, false friends, calques and semantic extensions. In her examination, apart from interactional strategies (direct or indirect appeals to the interlocutor in order to get help to produce a term in L3), Cenoz (2001) distinguishes between two types of CLI: code switching understood as whole sentences produced in L1 or L2 without appealing to the interlocutor for help, and transfer understood as the use of L1 one or more terms, as part of the utterance produced in L3, which includes borrowings and foreignisings (Cenoz 2001: 11). Lexical interlanguage transfer as the use of non-native words in the production of the target language is examined by De Angelis and Selinker (2001), and Williams and Hammarberg (2001, 2009) analyse non-adapted language switches. De Angelis (2005) and Odlin and Jarvis (2004) refer to the different status of function and content words and their different roles in L2 and L3 acquisition…

The aim of the study of Dewaele (1998) was to describe the mechanisms lying behind the creation of non-target lexemes in interlanguage (an analysis of transfer cases in the creation of lexical inventions – forms morpho-phonologically adapted to the target language [TL]). Ecke (2001) is concerned with the acquisition and processing of L3 words, their mental organisation and their relation to other L1, L2 and L3 words, and analyses lexical retrieval failures that he divides into two groups: tip-of-the-tongue states (temporary word retrieval failures when the subjects know the target word but temporarily have partial access to it) and word substitution errors. The objective of the research conducted by Gabryś-Barker (2005) was to analyse the conceptual structure of the multilingual mental lexicon, and in another study (2006) she examines automatic versus explicit processing, lexical search strategies used by the subjects and types of errors (transfer versus non-transfer errors).

Approaches to data collection

Researchers investigating CLI in L3 acquisition represent two approaches with regard to the data collection. Most of them represent the intersubjective approach which focuses on patterns of language use that can be observed in relatively large groups of language users. The aim of such oriented research, as opposed to intrasubjective studies (case studies) that will track the specifics of how CLI manifests itself in the language of individual language users, is to test hypotheses and formulate generalisations in order to determine mental processes underlying CLI and enhance

the understanding of the complexity of such an acquisition process (Jarvis and Pavlenko 2008: 29). It should be stated that the best way to investigate processes underlying tertiary language transfer would undoubtedly be a large-scale longitudinal intersubjective study, such as that of Ringbom who analysed the written essays of 11 000 subjects. In case of the remaining studies being analysed, two of them are case studies: De Angelis and Selinker (2001) and Hammarberg (2001), whereas the others are small-scale studies. According to the classification of Ellis (1994: 669–676), the kind of data used in TLA research (it is the same type of data SLA researchers use) can be data deliberately elicited from L3 learners in their unguided language use, such as film recalls etc. that allow the observation and documentation of verbal and non-verbal performance (clinical elicitation data), data collected through observation of the naturalistic language (natural use data), experimental elicitation data in form of guided linguistic performance (i.e. close tests or non-linguistic aspects of language use, such as reaction times), metalingual judgements (i.e. grammatical judgement tasks) and self-report data (e.g. introspection, retrospection, or think-aloud tasks).

Referring to the kind of data used in lexical transfer research, the following researchers use data deliberately elicited from L3 learners in their unguided language use: Ringbom (1987, 2001) analysed essays written by students; in his experiment, Dentler (2000) asked the subjects to write an answer to a letter and they were interviewed about their daily life or had to deliver a monologue stimulated by a picture story; in Cenoz (2001) a picture story was told individually to a native speaker; a written summary of a silent Charlie Chaplin movie was provided by the subjects in the experiment of Odlin and Jarvis (2004); and in another of their examinations (2008), the informants were asked to write narrative texts in their L3;

With respect to the data deliberately elicited from L3 learners in their guided language use, Ecke (2001) asked the subjects to translate words into their L3 and interpreted them according to their reaction times; and in the study of Gabryś-Barker (2005), the subjects were asked to perform association tests of the stimulus-response type.

Some studies exemplify a combination of different types of data used. For instance: Hammarberg (2001) analysed a corpus of conversations, interviews, picture stories, narrative discussions and introspective comments. Two kinds of data were also used by Gabryś-Barker (2006). The informants were given input texts (newspaper articles) in two different languages and were asked to translate them into their L3, and while performing the task they simultaneously verbalised their thoughts and emotions which were recorded and transcribed as so-called TAPs (thinking aloud protocols). The study of De Angelis and Selinker (2001) is also a combination of data deliberately elicited in the unguided and guided language use. The subjects in the two case studies were first interviewed, and after six months a second study was carried out in which one of the subjects was asked to translate words from her L2 into her L3 in order to establish her lexical knowledge of L2 and L3, referring to some preselected items produced during the first data collection, while the second subject was asked to prepare an oral report.

Parameters of the subjects

On the basis of a literature overview, Charlotte Hoffmann mentions in her classification, the kinds of trilingual subjects researchers are concerned with to include: trilingual children brought up with two home languages which are different from the one spoken in the wider community, children who grow up in a bilingual community and whose home language is different from the community language, bilinguals who have become trilingual through immigration, members of trilingual communities and third language learners and bilinguals who acquire the third language in a school context (citied in Cenoz 2008: 18). Among the studies listed only in case of the experiment of Hammarberg (2001) and De Angelis and Selinker (2001), lexical transfer was examined in a societal (subjects acquired their L3 through immigration) rather a school context.

Some of the additional crucial parameters participants should be characterised with in order to minimise all the ambiguities connected with data collection are given by De Angelis (2007: 12). Among the most crucial factors affecting cognitive and psycholinguistic processes of a multilingual person, she mentions: age of acquisition and proficiency (and how it was measured) of each non-native language, sequence of acquisition of all languages, exposure to native and non-native language environments, classroom language for instruction and amount of formal instruction for each non-native language, manner of acquisition (formal versus natural), context in which each language is or was used (at home, at school), active or passive use of all languages, number of languages known to the speaker and productive or receptive skills for each language (and how these were measured).

It can be imagined that in the case of intersubjective studies with a relatively high number of participants it is not possible to deliver details of the language learning history of each single subject, thus it can be expected that only the main subjects' parameters would be given: Ringbom (1987, 2001) investigated the language constellations: L1 Swedish, L2 Finnish, L3 English and L1 Finnish, L2 Swedish and L3 English by 16/17 year-old students. No exact information is given with regard to their proficiency level. The subjects of the study conducted by Ecke (2001) were Spanish learners of L2 English with an intermediate-high level of proficiency, and L3 German with a low level of proficiency. It is known that the participants of the study of De Angelis (2005) are learners of Italian as a third or fourth language with English, Spanish, or French as the native or non-native languages and a low proficiency of their L2s. Dentler (2000) analysed transfer errors of participants with the language sequence: L1 Swedish, L2 English and L3 German who were divided into groups according to their L3 time of instruction. In his analysis of transfer cases, Dewaele (1998) examined the advanced oral French of Dutch speakers, a number of whom had French as an L2 and English as an L3 with the remaining having L2 English and L3 French. In her famous study, Cenoz (2001) examined native speakers of Basque (a non Indo-European language) and Spanish (Spanish and English are typologically closer to each other than to Basque) in their L3 English. All participants had been learning English for four years attending the same school but they had

started learning English at different ages (three groups of age). Gabryś-Barker (2005) examined the interactions between L1 Polish or Portuguese, L2 English advanced and L3 German intermediate of university students. In another study by Gabryś-Barker (2006), data was gathered in two homogenous groups (foreign languages learned in most cases and not acquired) of participants with the language sequence, L1 Portuguese, L2 English (fluent) and L3 German (pre-intermediate). Additionally, Odlin and Jarvis (2004: 138) examined the production of 11–14 year-old students with language constellations L1 Finnish, L2 Swedish, L3 English and L1 Swedish, L2 Finnish and L3 English.

It must be emphasised that in case studies the researchers deliver a more exhaustive list of subjects' parameters. For instance, with regard to the study by Hammarberg (2001), it is known that the subject (Sarah Williams) was born and raised in England, studied French and German at University, has taken a short course of Italian (French and Italian are her additional L2s), and afterwards acquired a near-native competence in German, spending six years in Germany. She became involved in the process of acquiring (through exposure in work and daily life) Swedish due to her moving to Sweden. In their case study, De Angelis and Selinker (2001) examined two adult multilinguals: A 50-year-old woman with L1 French, fluent L2 English (lived and studied in English-speaking countries for approximately 35 years) and L3 Spanish (received formal instruction for five years and spent two summers in Spanish-speaking countries), and the target language Italian (lived for two years in Italy and received formal instruction). The other was an adult with L1 English (living in Britain), L2 Spanish (lived and worked in Chile for three-and-a-half years with four months formal instruction), L3 Italian (studied for three years in High School – at the time of data collection had been learning Italian for two weeks).

Outcomes of the studies – variables affecting CLI

The issue that should be discussed in a more detailed way is: what are the factors that cause the parallel activation of languages and lead the multilingual speaker to produce mixed utterances and hybrid forms? As the literature on language transfer shows, there are many variables to cause cross-linguistic influence. Among these factors many studies provide evidence for a factor of typological similarity, the frequency of language use, level of proficiency or L2 status ("foreign language effect") to play a significant role.

In his study, Ringbom (1987, 2001) observed that transfer to English L3 occurred mainly from Swedish as L1 or L2 (another L1 or L2 was Finnish). In case of L1 Swedish, transfer of form and meaning occurred, whereas when Swedish was the students' L2 only transfer of form was observed. Ringbom found out that it is psychotypology that determines the extent of L1 or L2 transfer because typologically similar languages provide much more reference points for the learner than is the case when they are unrelated. Ringbom also stated that the source of transfer

of meaning can also be a non-native language, but only when a high (near-native) level of proficiency is reached or there is a great amount of L2 input in the learners' environment.

Odlin and Jarvis (2008), referring to the conclusion made by Ringbom that both students with Finnish L1 and Swedish L2, and Swedish L1 and Finnish L2 showed formal lexical influence from Swedish into their L3 English, found that there is a difference between the way in which Finns and Swedes use words from Swedish in their L3 English and how frequently they use them. They noticed that it was L1 Swedish which mostly affected the way of usage. The general results of the study confirmed the findings of Ringbom. With respect to the study results of Cenoz (2001) (languages: L1 Basque, L2 Spanish, L3 English and L1 Spanish, L2 Basque, L3 English), she found that the older students showed more CLI instances than the younger students did, which was somewhat surprising. (Trying to explain this finding she admits that apart from a difference in their competence level, the fact that their proficiency was still limited should be taken into consideration). The finding, which supports the previous research, is linked to the factor of psychotypology as the main variable affecting language transfer (transfer from Spanish in all age groups). Cenoz also noticed that subjects with L1 Basque more often transferred words from their L2 Spanish into their L3 English compared to the language constellation L1 Spanish, L2 Basque, L3 English. In relation to the other studies examining the variable of L2 status, it can be implied that it is language distance that plays a more significant role in CLI than L2 status.

De Angelis (2005) (language sequence: L3 or L4 Italian, English, Finnish, French as native or non-native languages) found that in the production of L3 the subjects transferred more function words from their non-native L2s instead from their L1s, despite their low proficiency in the L2s. It was mainly psychotypology, and to a much lesser degree proficiency, which decided the selection of non-target function words, whereas both psychotypology and proficiency influenced the selection of content words. In the words of De Angelis: "It cannot be assumed *a priori* […] that whenever two languages typologically close to each other are present in the speaker`s mind and one of them is the speaker's native language, it is the native language that will have the most dominant role" (De Angelis 2005: 401).

Dentler (2000) (L1 Swedish, L2 English, L3 German) stated that in the case of borrowings and false friends the source of transfer was both L1 and L2, whereas in the case of calques and semantic extensions L1 was the source of transfer. Her findings are consistent with Ringbom's hypothesis about the role of the transfer of meaning. When all the languages are related, the source of transfer of form may be L1 or L2 and the selection may be determined by other factors such as: level of proficiency, recency and the context of acquisition. Besides this, she observed that both in written and speech data, growing proficiency means a higher amount of potential transfer errors.

In Ecke (2001) (Spanish learners of L3 English and L2 German translating words into L3 German), the following recall response patterns were observed: the subjects recalled (translated) the correct target word (TW) immediately, the immediately

recalled TW was incomplete or incorrect, they did not know the TW, were in a "tip-of-the-tongue" (TOT) state and extensively searched for a TW or non TW. This kind of transfer was mainly present in extensive search of TOT states with L3 words. This seemed contradictory to the results of the experiment conducted earlier by Ecke and Hall (2000) with the same language sequence and similar subjects showing that lexical errors in L3 production (transfer of form and transfer of meaning) are strongly affected by the typologically similar L2, which confirmed Ringbom's hypothesis concerning the occurrence of transfer of meaning from a native or in this case highly proficient related non-native language. Thus, it can be inferred that the type of task affects the processing which reflects on the various types of influence. Ecke suggests: "The degree of L1, L2 and L3 influence varies according to processing tasks and conditions. Errors mainly reflect unintended, automatic retrieval failures [mostly due to the influence of connected L2 structures that cannot be suppressed], whereas TOT states primarily involve extensive, conscious word search within the L3 [partially due to the suppression of L2 and L1 influence]" (Ecke 2001: 106).

The study of Dewaele (1998) (L1 Dutch, L2 French, L3 English/L1 Dutch, L2 English, L3 French) showed that French L2 and French L3 speakers differ in the proportion of lexical inventions that result from either intralingual or interlingual sources. As we can read in Dewaele (1998: 486): "The most striking fact is that French L2 speakers produce many lexical inventions based on intralingual strategies, whereas the French L3 speakers produce a higher proportion of lexical non-target-like forms based on interlingual strategies. Considering only the interlingual sources, it seems that the French L2 speakers have a higher proportion, of lexical inventions resulting from transfer from their L1 whereas the French L3 speakers produce more forms that can be traced to their L2". The results of this study indicate that assuming the proportion of lexical inventions from a particular language reflects the level of activation of that language (the language with the highest level of activation is the preferred source of lexical information) in the mind of the speaker, it can be observed that for the subjects, French (the selected language) has a higher level of activation for the French L2 speakers than for the French L3 speakers.

The outcomes of the study of Gabryś-Barker (2005) indicate that conceptual stores in the mental lexicon are interrelated across languages. The degree of such a relation is linked to the level of competence, the amount of exposure to a particular language and also to the transfer of training. On the other hand, growing proficiency causes separation between lexicons. Gabryś-Barker concludes: "Content words are language specific and form certain patterns: in L1 the experimental, idiosyncratic and cultural load of a stimulus word determines the storage and links between them. The associations in L2 do not reflect the same concepts but are more indicative of ways of learning (antonyms, chunks). In L3 (the lowest lexical competence), mostly lexical links such as translation, rather than semantic/conceptual ones are observed" (Gabryś-Barker 2005: 84). As far as grammatical words are concerned Gabryś-Barker suggests that "the links between them exist across languages and are not conceptually based" (Gabryś-Barker 2005: 84).

In the another study (translation of a newspaper article from L1 Portuguese and L2 English into L3 German), Gabryś-Barker (2006) concludes that in the case of the L1 input text, the processing is much more automatic without manifesting metalinguistic awareness, and as a consequence the lexical search is much shorter compared to the task with the L2 input text. She also concludes that it is the language of the input task that decides the activated language. As a result, all metalinguistic comments were mostly made in the language of input. Furthermore, the subjects represented a different approach to the input texts. In the case of the L1 task they seemed to focus on the semantic equivalence of single words, whereas in the L2 task they seemed to focus on the form and processed the text as a whole recognising fixed phrases in L2 and chunking the text properly. Gabryś-Barker suggests that such a different approach may result from a perception of the task as a classroom exercise, as both of the languages are learnt during formal instruction. With regard to the question of strategies, they are only present in the L2 task. Gabryś-Barker observed more transfer errors in the case of the L1 input text, which could be a result of different strategies used. The transfer errors in the L1 tasks were mainly semantic extensions, blends and code switching, and in calques, blends, code-switches and semantic extensions in the L2 task. In their two case studies in a social context, De Angelis and Selinker (2001) (the subjects' languages: L1 French, L2 English, L3 Spanish, L4 Italian and L1 English, L2 Spanish, L3 Italian) observed two types of interlanguage transfer in Italian which they call lexical interlanguage transfer (the use of an entire non-target interlanguage word) and morphological ILT (the use of non-target interlanguage morphemes in the formation of a target word). De Angelis provides additional support for the observation of Ringbom that transfer of meaning is restricted to the native language because of its automatisation and fluency, as well as from the fluent L2.

Hammarberg and Williams (Hammarberg 2001) (in their longitudinal case study with language sequence: L1 English, L2s French and Italian, L3 German, L4 Swedish) examined and classified seven different functions of non-adapted language switches. Hammarberg concludes that the subject switches mainly into English when the switch occurs for a pragmatic purpose (the first six categories), whereas in case of the WIPPs the subject switches into German (the switches become more infrequent as language proficiency grows). The six instances of code switches, which can be interpreted as intentional, help to manage the interaction or serve as metalinguistic comments, and the seventh code switch are attempts of formulating utterances in L3 and mostly involve function words. The authors point to the different functions languages adopt: L1 seems to perform an instrumental role (the speakers' knowledge which language is known to the interlocutor may influence the choice of external instrumental languages), and L2 "has a supplier role" in the learners' creation of words in L3. Both of these functions are less and less observed when language proficiency grows as they are gradually taken over by L3. Hammarberg underlies that it must be the L2 status that favours German as the external supplier language. A new finding in the study, as Hammarberg writes, is that in a multilingual subject it is one language that dominates as the external

supplier. It should be mentioned that Hammarberg had some knowledge of English, German and French, which was the reason for the frequent language switches of the subject at the initial stage of acquiring Swedish.

Conclusion

What we know about CLI in lexis is based upon empirical studies that investigate how language users make mental associations or interlingual identifications between the elements of the different languages that they are learning or already know. It is important to note that it is only in recent years that much more information on CLI and transfer in TLA in general has become available. The first major studies and discussions of the transfer phenomenon in TLA emerged during the 1990s, and it is only since then that this field of research – which has become a separate discipline – has been developing rapidly (TLA acquisition versus SLA-acquisition). As far as the methodology used and the trilingual subjects' parameters are concerned, in their mostly intersubjective small-case studies the authors have predominantly examined transfer in production in the school context with data deliberately elicited from language users in their unguided language use among the following languages in different constellations: Swedish, Finnish, English, French, Spanish, German, Italian, and also (in some cases) Polish, Dutch and Basque.

As already mentioned, the main area of research in a European context is linguistic, forward and lateral lexical interlingual transfer which is not seen from the perspective of intentionality and whether it is positive or negative. One major issue that has dominated the field of CLI investigation is transfer of form and transfer of meaning, as well as transfer of content (lexical open-class words) and function words (closed-class words) due to their different storage and processing patterns in the mind. An issue that has distinctly grown in importance in recent studies, is the role of a number of variables in shaping the direction and intensity of CLI such as: typological distance between languages (also psychotypology), level of proficiency in each language, recency of language use, foreign language status, functions performed by the speaker of each language and context of language acquisition.

To conclude, as the focus of attention is lexical transfer research, a further study with more focus on CLI needs to be undertaken within the other language subsystems such as the morphological, syntactic, phonological, orthographic and pragmatic ones. Further research should also be done to investigate transfer in reception, reverse or multidirectional transfer, and cumulative impacts.

It should be also taken into account that the study results have important implications for the organisation of the didactic processes for subjects studying a second foreign language, and that they should serve as a basis for future studies examining the aspects of CLI mentioned, in a specific Polish context with the foreign language sequence: English as L2 and predominantly German (or another foreign language) as L3, taking into account all the consequences, such the model of plurilinguality has for the plurilingual subject.

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