

Exploring the Relationship Between Multilingual Learning Experience, Metalinguistic Knowledge, and Metalinguistic Awareness

Francesca D'Angelo
Università degli Studi di Salerno
fdangelo@unisa.it

Abstract

The last two decades have witnessed a considerable increase in interest in Third or Additional Language Acquisition (TLA). The positive effects of bilingualism in TLA have related the advantages evident in bilingual learners to the influence of bilingualism on cognitive development and, specifically, Metalinguistic Awareness (MLA). The paper aims, first, at providing a comprehensive portrait of what MLA is, considering the complexity of this factor, its linguistic and cognitive nature along the implicit - explicit continuum. Second, it disentangles the intricate relationship between TLA on one hand, and the development of MLA and other mediating factors on the other, including level of bilingualism, literacy, age of acquisition of the L2, language use, and language knowledge. Third, the work focuses on a factor that has been the object of an intense debate in psycholinguistics, i.e. the role of awareness in the language learning process, to shed light on the different aspects distinguishing Metalinguistic Knowledge (MLK) and Metalinguistic Awareness (MLA) of the language. A comprehensive analysis of the most influential literature in the field, comparing contrasting perspectives of study, will be propounded to offer a comprehensive overview of the discussed phenomena to better understand the impact they have on multilingual education.

Keywords

Third Language Acquisition; Bilingualism; Metalinguistic Awareness; Metalinguistic Knowledge; Multilingual Education.

1. Introduction

The popular belief among lay speakers that bilinguals are better language learners is also supported by several influential works in the field of Third or Additional Language Acquisition (TLA) (e.g. Cenoz & Genesee 1998, Jessner 1999, Thomas 1988). All these studies generally explain the so-called bilingual advantage in terms of cognitive development and increased levels of Metalinguistic Awareness (MLA). Specifically, in line with the Dynamic Model of Multilingualism (DMM), (Herdina & Jessner, 2002), Metalinguistic Knowledge (MLK) and MLA have been detected as crucial factors that ‘can contribute to the catalytic or accelerating effect in TLA’ (Jessner 2008a: 26).

However, given the multifaceted and complex nature of the area of research (Larsen-Freeman 1997, Verspoor et al. 2011), MLA is not easy to define and measure, in both language acquisition and non-language acquisition domains including cognitive psychology, cognitive science, and neuroscience. The present work aims to investigate the relationship between MLA, developed in previous languages, under different circumstances, and TLA. In particular, it analyses the complex and non-unitary nature of MLA, being both linguistic and cognitive, explicit and implicit. Besides, the variables known to affect its development, including different types of bilingualism, literacy, implicit and explicit instruction, will be examined to thoroughly understand its relevance in terms of multilingual education. To propound a complete overview of the multiple nuances characterising the phenomenon of

MLA, the most relevant works selected from the field of cognitive linguistics will be compared and contrasted.

2. Defining Metalinguistic Awareness

From a closer look at previous and current research on the different routes of acquisition available to bilingual learners, it can be noticed that the most striking difference between implicit and explicit learning is the presence or lack of awareness (Rebuschat & Williams 2012). The role of awareness in learning is explicitly or implicitly subsumed in several variables including type of learning, learning condition, type of awareness (i.e. language, metacognitive, conscious, unconscious etc.) as well as constructs such as noticing and perception (Squires 2016). More specifically, when dealing with language learning, these concepts are often associated with the term "metalinguistic": i.e. metalinguistic awareness and metalinguistic knowledge of the language. The majority of the studies taken into account in the present work explain the instructed bilinguals' better performance in TLA in terms of higher MLA and improved linguistic strategies. Bowden, Sanz & Stafford (2005), for instance, explain the bilingual advantage in additional languages referring to bilinguals' experience as language learners. Specifically, they maintain that 'they look for more sources of input, make an early effort to use the new language, and show self-direction and a positive attitude toward the task' (2005:122).

Nonetheless, it still remains unclear how and to which extent MLA helps multilingual learners to acquire an additional language. Thus, what is MLA and why is it considered of paramount importance for the development of additional languages in bilinguals? Providing a general and commonly accepted definition of metalinguistic concepts is not an easy task. The terminology used by academics to describe them may seem rather confusing due to the different scientific approaches (i.e. cognitive, psychological, educational) adopted to analyse MLA and to the variety of competing words employed to describe specific aspects of metalinguistic concepts. In Cenoz's view (2003), MLA works as a mediator between bilingualism on one hand and TLA on the other. This means that bilingualism has a positive effect on the development of MLA and communicative skills and these factors, in turn, have an impact on the process of learning new languages. In other words, positive effects on bilingualism on foreign language learning occur at least because they have a positive influence on MLA in the first place. Malakoff's definition helps to clarify what exactly means to be "metalinguistically aware". Specifically, the author claims that (MLA):

allows the individual to step back from the comprehension or production of an utterance to consider the linguistic form and structure underlying the meaning of the utterance. Thus, a metalinguistic task requires the individual to think about the linguistic nature of the message: to attend and to reflect on the structural features of the language. To be metalinguistically aware, then, is to know how to approach and solve certain types of problems which themselves demand certain cognitive and linguistic skills (Malakoff 1992: 518).

An enormous contribution to better understand the degree and nature of metalinguistic concepts comes from Bialystok's work *Bilingualism in Development* (2001). Indeed, she disambiguates the three main entities qualified by the term "metalinguistic": i.e. knowledge, ability, and awareness. Concerning the first concept, metalinguistic knowledge (or knowledge about language), Bialystok argues that what makes it different from knowledge about grammar is the level of generality at which rules are represented. More precisely, it is the broader knowledge of abstract principles of language, which is distinct from the knowledge of a particular language. Contrarily, metalinguistic ability is portrayed as 'the capacity to use knowledge about language as opposed to the ability to use language' (Bialystok 2001:124).

Finally, to have MLA, attention must be actively focused on the domain of knowledge that describes the explicit properties of languages.

De Angelis, on the other hand, adopts the broader definition of MLA. In her opinion, it refers to 'the learners' ability to think of language and of perceiving language including the ability to separate meaning and forms, discriminate language components, identify ambiguity and understand the use of grammatical forms and structures' (De Angelis 2007: 121). It is worth noticing that what the author emphasises here is the role played by the formal context of acquisition of the languages involved. That is, they provide further metalinguistic knowledge that learners can rely upon when learning additional languages. Accordingly, formal instruction in the second language is seen as a determining factor that has an impact on the students' performance in a third language.

Hence, the reason why metalinguistic knowledge, ability, and awareness have a positive influence on bilingual learners of additional languages is that they are all represented in an abstract and general sense. In other words, they go beyond the knowledge of any particular language mastered, becoming explicit and universal to such a point to be applied to the study of any additional language. Previous and current research into the field has resorted to different arguments to explain the cause of the increased level of MLA, observed in bilinguals, which was also responsible for their better performance in L3. Indeed, because of the complex nature of the relatively new field of study as well as the number of variables to consider in TLA, there is still no common agreement among scholars whether MLA is mainly to be attributed to the context of acquisition of the L2 (i.e. formal/informal), the level of proficiency attained in the L2 or the amount of use and exposure to the language itself (see Cenoz 2013 for a review). Nonetheless, if on one hand it is commonly agreed that MLA is one of the first and most important variables which makes bilinguals better language learners, it still remains to clarify whether this factor improves the process of language learning or whether it is the other way round.

On the complexity of TLA, it is worth discussing the aforementioned Herdina and Jessner's Dynamic Model of Multilingualism (DMM) (Herdina & Jessner 2002). It describes the development of a multilingual system as a changeable, non-linear, reversible and complex phenomenon. More specifically, the DMM is based on the assumption that there are a number of open systems (i.e. LS1/LS2/LS3 etc.) depending on psychological factors. Each system is interdependent and not autonomous from the other ones and the stability of the system depends on language maintenance and the language choices of the multilingual speakers, affected by the perceived communicative needs. The holistic approach described in the model is crucial to understand the dynamic interaction among complex systems in multilingual language processing. Indeed, multilingual proficiency (MP) is described as the dynamic interaction among various psycholinguistic systems, crosslinguistic interaction (CLIN), and the M(ultilingualism)-factor or M-effect (LS1, LS2, LS3, LSN + M-factor = MP) (Jessner 2008b).

3. The role of Metalinguistic Awareness and other mediating factors on additional language learning

Which are the necessary conditions responsible for the development of MLA? Does the context and type of acquisition of previous languages play a determining role? One of the first studies taking into account the context of acquisition of the L2 as an individual difference variable is Thomas' experiment (Thomas 1988). The research compares adult bilinguals who learnt their second language informally with those who had already received formal classroom training in both languages. The data gathered in the study suggest that bilingual

students who received formal training in both languages perform better than students who received no formal training. Moreover, the findings provide convincing evidence that bilinguals who acquire two language systems naturally, and later acquire literacy only in their first language, do not necessarily develop the skills required to learn an additional language in a formal setting. Thus, Thomas maintains that to fully exploit the advantages of learning a language (that is typologically related to the target language) students must necessarily have explicit instruction in the second language. Interestingly, she maintained that even at an elementary level of foreign language learning, students' performance is facilitated by MLA and that it works as 'a monitor to create acceptable spoken or written utterances in a third language' (Thomas 1988: 236).

Along similar lines, in a work by Roehr and colleagues (Roehr, Gàñem & Gutiérrez 2009), the impact of MLK on TLA has been tested in English speaking University-level learners of German and Spanish. The findings appear to suggest that language learning experience in formal settings considerably affected the level of MLK attained by the participants. Additionally, a closer look at the data indicates that, despite a considerable relationship with language learning aptitude and working memory, MLK is separable and distinct and constitutes an individual difference variable on its right in the field of language learning research. Another remarkable concept is that the nature of MLK has been described as a learnable, task-dependent and malleable feature rather than stable. This means that it can be brought into awareness, and articulated with processes involving these types of knowledge, drawing on the higher level of mental faculties of reasoning and analysis.

3.1 *Level of Bilingualism: the Role of Proficiency in L2*

An influential paper by Roehr (2008) specifically looks at the correlation between proficiency in L2 and MLK in L1 English learners of German as a second language. The author points out that knowledge of grammar and vocabulary, as evident in proficient L2 performance, may not only be built upon the basis of explicitly acquired MLK but may also help a learner develop their MLK in the first place. In other words, she argues that knowledge about knowledge may arise from language competence (i.e. proficiency) rather than the other way round. Besides, the research raises other important questions, including the extent to which metalinguistic description and explanation ability may have different roles to play at different levels of second language proficiency. In particular, it suggested that to investigate the cause-effect relationship between explanation and language analytic abilities, it is necessary to compare several proficiency levels through a longitudinal study assessing whether MLK about specific features is constructed based on the knowledge of the L2.

One of the most interesting approaches into the field comes from the work of Cenoz & Valencia (1994) that considered the influence of bilingualism on third language learning comparing Basque/Spanish bilinguals learning English as an L3. Assuming the Interdependence Hypothesis as a starting point, (Cummins 1981), they claim that if instruction in one language is effective in promoting proficiency in this language, the transfer of this proficiency to another language will occur, provided there are enough exposure and motivation. In agreement with previous studies, the findings show that: first, bilingualism has a positive mediating effect on TLA; second, the regression analysis demonstrated that the inclusion of bilingualism significantly improved the effects of other predictors and, most importantly, there were no interaction effects between bilingualism and other predictors. This means that the effects of bilingualism were obtained regardless of the effects of cognitive, sociocultural, psychological variables. Hence, the experiments confirm the thesis propounded by Swain and colleagues (Swain et al. 1990) that literacy in a heritage language is associated with higher levels of achievement in a third language.

Jaensch (2009), on the other hand, in an interesting contribution from a different perspective of study, i.e. Universal Grammar, investigates the impact that the level of proficiency in L2 has on the acquisition of TLA. The three languages involved in the research are Japanese (L1), English (L2), and German (L3). The significance of the work relies on demonstrating that L3 learners perform better than monolinguals, both in terms of general and specific features proficiency. Also, it raises the question of whether the proficiency level in an L2 can affect the performance on a specific element in the L3 which is absent in the participants' first and second language. Notably, the results indicate that even though grammatical gender is not marked on determiners in English, participants with a similar proficiency level in German but higher proficiency in English L2 performed better in the gender assignment task. To interpret these findings, the author resorts to two different theories: i.e. the additive effect of bilingualism hypothesis (Lambert 1974) and the threshold hypothesis (Cummins 1976). Based on the evidence provided, it is here suggested that learners of a third language exhibit more refined MLA, a wider lexical knowledge, and more developed cognitive skills which lead them to become more sensitive to new features in the third language. Specifically, Jaensch has named this skill "enhanced feature sensitivity", which is responsible for helping third language learners to trigger the setting of Universal Grammar parameters.

3.2 The Role of Literacy in Prior Languages

On the role of literacy in prior languages, it is worth recalling the aforementioned question raised by Swain and colleagues (Swain et al. 1990) on the role of Heritage Language (HL). Specifically, it deals with the impact on third language learning of HL use including literacy compared to HL use which does not include literacy. Results showed that literacy in the HL has a strong positive impact on learning French as a third language in the bilingual programme, whereas HL use without literacy has little effect. The learning of second language literacy skills is enhanced through having developed such skills in the first language. The effect of first language literacy has been reported per se, independently of first language oral language skills, the general level of proficiency and typological proximity between the two languages. What is remarkable is that HL literacy provides them with a broader understanding of 'what reading and writing are for, using the medium of a language that [they] speak fluently' (Hudelson 1987: 830). Besides, it may help them to enhance pride and self-confidence, which, as the authors suggest, may breed further success and linguistic interdependence.

Another work looking at the specific role of literacy comes from Cristina Sanz (2000), who investigated the relationship between biliteracy in the minority and majority language, i.e. Catalan and Spanish, and the acquisition of English as a foreign language. In this research, apart from separating the effects of biliteracy and bilingualism, several predicting factors in the acquisition of additional languages were also controlled, including intelligence, motivation and sociolinguistic status. Additionally, despite not having operationalised the effect of cognitive variables, such as Working Memory and MLA, the study suggests interesting hypotheses based on previous studies results, which explain the advantage of bilinguals over monolinguals on TLA. Referring to the weak interface position in L2 acquisition theory (R. Ellis 1994), Sanz propounds the view that if on one hand explicit knowledge cannot be transformed into implicit knowledge of L2, it can still help in the acquisition process. Specifically, by acting as an advanced organiser, explicit knowledge focuses learners' attention on the relevant features of the language. Indeed, she states that bilingualism may naturally show the behaviour that different researchers working within the focus on form tradition (i.e. Doughty & Williams 1998) are trying to induce in classroom language learners.

Thus, it can be argued that literacy encourages MLA on account of language being turned into a visual medium. That is, readers focus on form and improve their memory skills, their aesthetic function as well as their reifying function, i.e. the meaning no longer resides in the speaker but in the text (Kemp 2001). Writing, in particular, provides the means of analysing language because it turns the language into an object. Therefore, literacy is fundamental for the development of MLA in that it permits people to visualise the language. Besides, once acknowledged that biliteracy enhances MLA and, consequently, the process of language learning itself, it is worth pointing out that even a limited amount of formal L2 learning help develop the aforementioned metalinguistic skills. Indeed, an interesting study by Yelland et al. (1993) appears to validate such a view since it proved that advanced bilingualism is not necessary for a learners' metalinguistic skill to develop. That is, even limited contact with a second language can have beneficial effects, which have also been observed to carry on into the acquisition of literacy.

3.3 Early and Late Bilingualism: the Role of Age of Acquisition of Previous Languages

A controversial issue, largely debated among scholars, on the benefits of bilingualism in the acquisition of additional languages, concerns the age of acquisition and the type and amount of instruction required to bilinguals in the L2 to show an advantage in the process and outcome of learning an additional language. In an influential work, after comparing previous research into the field, Rothman (2015) argues that early bilinguals outperform late bilinguals in TLA due to having two activated grammatical systems developed from an early age. On the other hand, Jaensch's view (2012), following the Universal Grammar approach, relies on the assumption that there are more advantages for learners of an L3 if their L2 experience begins at an older age since they can have access to a more enhanced MLA in contrast to the more implicit learning environment of younger learners.

Cenoz (2001) presents similar findings in her study on cross-linguistic influence on TLA. The results indicate that older learners show more cross-linguistic influence than younger learners. According to the author, this is due to the higher MLA developed by older students which allow them to perceive the typological distance of the languages involved and to choose which one is the most suitable to use as a source of transfer when acquiring a foreign language. Specifically, the older participants involved in the study were reported to transfer more words from Spanish than Basque when learning English as a third language since they were aware of the linguistic distance. On the other hand, younger participants with a lower degree of MLA used both, Spanish and Basque terms, as a source of transfer since they were not able to perceive the objective linguistic distance.

In an additional paper (Park & Starr 2015), it has been claimed that both early and late bilinguals have benefits in TLA following different routes and learning strategies. Indeed, if on one hand early bilingualism is achieved in a more implicit language learning environment, it is also true that learners can access two more developed grammatical systems. On the other hand, late bilingualism is more explicit in that it facilitates the acquisition of formal rules in a subsequent language. In other words, both explanations account for enhanced levels of MLA with a difference concerning the routes of acquisition and the particular type of this fundamental cognitive skill.

3.4 The Role of Language Use and Language Knowledge

Further evidence to better understand the role of MLA under specific circumstances of language learning, i.e. language proficiency and use, comes from Bialystok and Barac's work (2012). In their study, an accurate portrait of the different factors associated with the reported

advantages found in fully bilinguals is propounded to dissociate the effects of MLA and executive control. More specifically, the research aim was to identify the specific features of the bilingual experience responsible for different performances on metalinguistic and executive function tasks in children becoming bilingual. The results demonstrated that the two areas investigated are affected by different aspects of bilingualism. That is, metalinguistic performance improved with increasing knowledge of the language of testing whereas performance in executive control tasks improved with more experience in a bilingual education environment.

This dissociation has a great impact on the interpretation of previous research into bilingualism. Indeed, previous studies did not always share the view that literacy fosters the process and outcome of language acquisition. Mägiste's work, for example, in 1984, suggests that differences in performance are to be attributed to whether a language is used or not rather than to the level of literacy achieved in the second language (Mägiste 1984). This pattern was evident with different types of tests administered. The popular view in the literature that people who become bilingual at an early stage will later have greater facility in picking up a third language is only partially acknowledged by the author. She states that if, on one hand, this is certainly the case at certain metalinguistic levels, on the other, it does not occur automatically at a very elementary level of language learning. In this case, it seems to be more a question of strategy.

On the other hand, Bialystok and Barac's aforementioned work (2012) questions previous research assumptions that fully balanced bilingualism is necessary for modifications in executive functioning to occur (e.g. Bialystok & Majumder 1998, Carlson & Meltzoff 2008). Instead, the study shows that the accumulation of experience in a formal bilingual setting also contributes to the development of executive control for those children. Additionally, their results shed light on the relationship between metalinguistic performance and bilingualism providing evidence to promote the formal study of languages too. Indeed, unlike executive control, metalinguistic advantages have been reported even in participants with lower levels of bilingualism. Hence, the study highlights the importance of spending time in a bilingual education program in order to have improvements in children's executive functions. Interestingly, they noticed that what makes the difference in metalinguistic tasks is not the degree of bilingualism but the level of linguistic proficiency attained in the specific language examined. That is to say, knowledge of English was associated with higher metalinguistic performance in English but this relationship would be expected in monolingual children too.

Thus, the two main areas where a positive bilingual effect has been observed, i.e. MLA and executive control, seem to be influenced by different kinds of experiences: achievement of adequate linguistic proficiency and accumulated practice in the language. That is, an increased level of bilingualism was not necessarily associated with enhanced performance in the task. The authors explained these findings by the fact that bilingualism helps to develop and understand structural relations within languages but, beyond that insight, more bilingual experience does not lead to further development in that area. What makes the study particularly relevant is the contribution it gives to the understanding of the mechanism by which bilingualism affects cognitive and linguistic outcomes by taking into account two aspects of bilingualism responsible for differences between monolinguals and bilinguals: i.e. proficiency and use.

4. From Metalinguistic Knowledge to Metalinguistic Awareness

A crucial aspect of MLA concerns its linguistic or cognitive nature and whether it is a cause or effect of cognitive and linguistic development. Again, this remains unclear because all develop through childhood and it is not always possible to separate them experimentally in children. Although relatively little research takes place in adults' MLA, psycholinguists argue that the development of MLA is related to cognitive development in that it involves cognitive processes that are different from those operating for language perception and production.

Bialystok's interpretation to account for different findings, coming from research into bilingualism and MLA, employing different tasks and looking at specific variables, concerns the difference between analysis and control (Bialystok 2001). After an accurate review of previous research into the effects of bilingualism and literacy, she concluded that higher levels of control increase with bilingualism, whereas higher levels of analysis increase with literacy. This explains the different performances in different types of tasks on behalf of bilinguals with different linguistic and cognitive backgrounds. In particular, it has been observed that the advantage occurred most often when the level of bilingualism was controlled, i.e. balanced bilinguals performed better in all tasks. Another possible interpretation provided by Bialystok accounts for the progression from MLK and MLA observed in the participants. Indeed, this progression reflects an increase in the amount of attentional control required to accomplish the tasks. Therefore, participants begin to show different results as soon as the task aims at assessing MLA rather than MLK.

Rebuschat and Williams (2012) state that, in psychology, the most commonly used criterion for discerning between implicit and explicit knowledge is the presence or lack of awareness. That is, implicit knowledge is unconscious knowledge that subjects are generally not aware of possessing whereas explicit knowledge is conscious knowledge that subjects are aware of possessing even though they may not always be able to provide an explanation for it. The same view is shared by Robinson (2017), which highlights the role of attention as a measure to determine the aforementioned distinction between implicit and explicit learning. Attention and awareness are presented as two related concepts playing a fundamental and different role in the process of language learning. Specifically, the two types of attention described are perceptual attention, that is automatic and involuntary, and focal attention, which relies on some degree of voluntary executive control.

As discussed, the issue of the amount and type of attention to input, necessary for subsequent learning to occur, as well as the difference between noticing and understanding, has attracted a large amount of interest among academics in SLA (see Truscott & Sharwood Smith 2011). In cognitive and language acquisition domains, non-attentional learning means learning without focal attention to the input stimuli, selecting them for further processing and encoding in memory. It has been reported that, in some cases, simple detection of input at a stage of perceptual processing before selection contribute to learning. That is to say, learning could be said to take place without awareness since focal attention is widely acknowledged as a precondition for awareness (Tomlin & Villa 1994).

5. Conclusion

After comparing and contrasting previous and current research focused on specific aspects of the intricate relationship between the level of MLA developed, previous language learning experience and TLA, it can be argued that there are a number of aspects that still need to be further investigated. That is, to have a broader understanding of these concepts as well as a common agreement into the field of research, task construal and sensitivity of measurement of awareness need to be considered as crucial factors in future studies. Accordingly, it would be worth adopting sensitive measures to detect the status of awareness under different points of

view, i.e. cognitive, psychological, linguistic. On the other hand, new methodologies to explore and operationalise these fundamental aspects of language learning are needed.

Besides, the context of acquisition of bilinguals' second language should be considered as a separate individual variable that affects the process and outcome of language learning for different reasons. First, based on the evidence provided by the most influential works taken into account, it can be claimed that it plays a crucial role in the development of more effective learning strategies and enhanced MLA. Second, as discussed in the present work, to observe any positive effects of bilingualism in the acquisition of TLA in a formal environment, bilingualism must be supported by instruction in both first and second language.

To conclude, despite the considerable amount of interest shown across all the studies examined in the relatively new area of research, what emerges is that there is still a lot to investigate due to the high complexity of the field of TLA. Indeed, the numerous variables which need to be controlled at the same time, including the age of acquisition, context of acquisition, level of proficiency and typological proximity of at least three different languages involved on one hand and the difficulty to measure and determine what is implicit and explicit on the other, make the domain of multilingualism difficult to analyse and portrait. To say it in Larsen-Freeman's words, 'there is a multitude of interacting factors that have been proposed to determine the degree to which the SLA process will be successful [...]. Perhaps no one of these by itself is a determining factor. The interaction of them, however, has a very profound effect' (Larsen-Freeman 1997:151).

Indeed, variation in multilingual development and use is strongly linked to the dependence of the system on social, psycholinguistic, and individual factors (Herdina & Jessner 2002), not to mention the mode of language learning in the form of either natural or instructional learning, but also various combinations of both (see Cenoz & Genesee 1998). In future research, A DST approach using dynamic modelling to investigate properties of the dynamic adaptation to contexts in change, is able to take all the relevant characteristics of multilingual learning and use into account (Jessner 2008a: 272-273). In particular, the model bridges the gap between research on the effects of bilingualism and research on additional language acquisition. It suggests that future language acquisition studies should go beyond the study of language contact between two languages to include other forms of bilingualism, considered as the knowledge of two or multiple languages. Moreover, it allows predicting multilingual development based on all the numerous factors involved in the process, in a more holistic approach. Finally, it overcomes the implicit and explicit monolingual bias of multilingualism research through the development of an autonomous model of multilingualism providing a scientific means of predicting multilingual development on the basis of the numerous factors involved (Herdina & Jessner, 2002: 86-87).

Hence, as Cummins (1979) maintains, the expectation that research into the psychological, linguistic, and cognitive consequences of bilingualism should produce completely consistent results is a false premise. That is to say, there is not one single phenomenon called bilingualism that ought to influence the mental lives of all bilinguals in the same way. Accordingly, research should be directed towards identifying those conditions under which bilingual learning experiences are likely to enhance all the different aspects of cognitive growth, with the context of acquisition of previous languages being one of the most important.

References

- Bialystok E., 2001, *Bilingualism in Development: Language, Literacy and Cognition*, Cambridge, Cambridge University Press.
- Bialystok E., Barac R., 2012, “Emerging Bilingualism: Dissociating Advantages for Metalinguistic Awareness and Executive Control, in *Cognition*, 122[1], pp. 67-73 <https://doi.org/10.1016/j.cognition.2011.08.003>.
- Bialystok E., Majumder S., 1998, “The relationship between bilingualism and the development of cognitive processes in problem solving”, in *Applied Psycholinguistics*, 19, pp. 69-85 <https://psycnet.apa.org/doi/10.1017/S0142716400010584>.
- Bowden H., Sanz C., Stafford A., 2005, “Individual Differences: Age, Sex, Working Memory, and Prior Knowledge” in C. Sanz (Ed.), *Mind and Context in Adult Second Language Acquisition: Methods, Theory and Practice*. Washington DC, Georgetown University Press: 105-140.
- Carlson S.M., Meltzoff A.N., 2008, “Bilingual experience and executive functioning in young children”, in *Developmental Science*, 11[2], pp. 282-298 <https://doi.org/10.1111/j.1467-7687.2008.00675.x>.
- Cenoz J. 2013, “The influence of bilingualism on third language acquisition: Focus on multilingualism” in *Language Teaching*, 46, pp. 71-86 http://journals.cambridge.org/abstract_S0261444811000218.
- Cenoz J., 2001, “The effect of linguistic distance, L2 status and age on cross-linguistic influence in L3 Acquisition”, in J. Cenoz, B. Hufeisen & U. Jessner (Eds), *Cross-linguistic Influence in Third Language Acquisition*, Clevedon, Multilingual Matters, pp. 8-20.
- Cenoz J., 2003, “The additive effect of bilingualism on third language acquisition: A review”, in *International Journal of Bilingualism*, 7[1], pp. 71-87 <https://doi.org/10.1177%2F13670069030070010501>.
- Cenoz J., Genesee F., 1998, *Beyond Bilingualism: Multilingualism and Multilingual Education*, Clevedon, Multilingual Matters.
- Cenoz J., Valencia J., 1994, “Additive trilingualism: Evidence from the Basque Country”, in *Applied Psycholinguistics*, 15, pp. 197-209 <https://doi.org/10.1017/S0142716400005324>.
- Cummins J., 1979, “Linguistic Interdependence and the Educational Development of Bilingual Children”, in *Review of Educational Research*, 49, pp. 222-251 <https://doi.org/10.2307/1169960>.
- Cummins J., 1981, “The role of primary language development in promoting educational success for language minority students”, in *Schooling and language minority students: A theoretical framework*, California State Department of Education, pp. 3-49.
- Cummins J., 1976, *The influence of bilingualism on cognitive growth*. Working Papers on Bilingualism, 9, 1–43.

De Angelis G., 2007, *Third or additional Language Acquisition*, Clevedon, Multilingual Matters.

Doughty C., Williams J., 1998, *Focus on Form in Classroom Second Language Acquisition*, New York, Cambridge University Press.

Ellis R., 1994, “A theory of instructed second language acquisition”, in N. Ellis (Ed.), *Implicit and explicit learning of languages*, San Diego, Academic, pp. 79-114.

Herdina P. & Jessner U., 2002. *A dynamic model of multilingualism: Perspectives of change in psycholinguistics* (Vol. 121). Multilingual Matters.

Hudelson S., 1987, “The role of native language literacy in the education of language minority children”, in *Language Arts*, 64, pp. 827-841 <http://www.jstor.org/stable/41961686>.

Jaensch C., 2009, “L3 enhanced feature sensitivity as a result of higher proficiency in the L2”, in: Y-KI Leung (Ed.), *Third language acquisition and Universal Grammar*, Clevedon, Multilingual Matters, pp. 15-43.

Jaensch C., 2012, Acquisition of L3 German, in A. Amaro, S. Flynn, & J. Rothman (Ed.), *Third language acquisition in adulthood*, Philadelphia, PA, John Benjamins, pp. 165-194.

Jessner U., 1999, “Metalinguistic Awareness in Multilinguals: Cognitive Aspects of Third Language Learning”, in *Language Awareness*, 8 [3-4], pp. 201-209 <https://doi.org/10.1080/09658419908667129>.

Jessner U., 2008a, Language Awareness in Multilinguals: Theoretical Trends. In J. Cenoz and N. H. Hornberger (Eds.), *Encyclopedia of Language and Education*, 2nd Edition, Volume 6: Knowledge about Language (pp. 357-369). Springer. https://doi.org/10.1007/978-0-387-30424-3_161

Jessner U., 2008b, A DST model of multilingualism and the role of metalinguistic awareness. *The Modern Language Journal*, 92(2), 270-283 <https://doi.org/10.1111/j.1540-4781.2008.00718.x>.

Kemp C., 2001, *Metalinguistic Awareness in Multilinguals: implicit and explicit grammatical awareness and its relationship with language experience and language attainment*. Unpublished PhD thesis, University of Edinburgh.

Lambert W. E., 1974, Culture and language as factors in learning and education. In F. E. Abour & R. D. Meade (Eds.), Cultural factors in learning and education pp. 91–122 Bellingham, Washington: 5th Western Washington Symposium on Learning.

Larsen-Freeman D., 1997, “Chaos/complexity science and second language acquisition”, in *Applied Linguistics*, 18(2), 141-165 <https://doi.org/10.1093/applin/18.2.14>.

Mägiste E., 1984, “Stroop tasks and dichotic translation: the development of interference patterns in bilinguals”, in *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 10[2], pp. 304-315 <https://doi.org/10.1037/0278-7393.10.2.304>.

Malakoff M., 1992, “Translation Ability: a Natural Bilingual Metalinguistic Skill”, in R.

Harris (Ed.), *Cognitive Processing in Bilinguals*, Hillsdale, NJ, Lawrence Erlbaum, pp. 515-530 [https://doi.org/10.1016/S0166-4115\(08\)61514-9](https://doi.org/10.1016/S0166-4115(08)61514-9).

Park M., Starr R.L., 2015, “The role of formal L2 learning experience in L3 acquisition among early bilinguals”, in *International Journal of Multilingualism*, 13[3], pp. 271-291 <http://dx.doi.org/10.1080/14790718.2015.1088544>.

Rebuschat P., Williams J., 2012, “Implicit and explicit knowledge in second language acquisition”, in *Applied Psycholinguistics*, 33[4], pp. 829-856 <https://doi.org/10.1017/S0142716411000580>.

Robinson P., 2017, “Attention and Awareness”, in J. Cenoz, D. Gorter, S. May (Ed.), *Language Awareness and Multilingualism*, Cham., Springer, pp. 125-134.

Roehr K., 2008, “Metalinguistic knowledge and language ability in university-level L2 learners”, in *Applied Linguistics*, 29[2], pp. 173-199 <https://doi.org/10.1093/applin/amm037>.

Roehr K., Gánem-Gutiérrez G., 2009, “The status of metalinguistic knowledge in instructed adult L2 learning”, in *Language Awareness*, 18[2], pp. 165-181 <http://repository.essex.ac.uk/id/eprint/253>.

Rothman J., 2015, “Linguistic and cognitive motivations for the typological primacy model of third language (L3) transfer: timing of acquisition and proficiency considered”, in *Bilingualism: Language and Cognition*, 18[2], pp. 179-190 <https://doi.org/10.1017/S136672891300059X>.

Sanz C., 2000, “Bilingual education enhances third language acquisition: Evidence from Catalonia”, in *Applied Psycholinguistics*, 21[1], pp. 23-44 <https://doi.org/10.1017/S0142716400001028>.

Squires L., 2016, “Processing Grammatical Differences: Perceiving versus Noticing”, in A. Babel (Ed.), *Awareness and Control in Sociolinguistic Research*. Cambridge, Cambridge University Press: 80-103.

Swain M., Lapkin S., Rowen, N. and D. Hart, 1990, “The role of mother tongue literacy in third language learning”, in *Language, Culture and Curriculum*, 3[1], pp. 65-8 <https://doi.org/10.1177%2F136216880000400304>.

Thomas J., 1988, “The role played by metalinguistic awareness in second and third language learning”, in *Journal of Multilingual and Multicultural Development*, 9, pp. 235-247 [https://doi.org/10.1080/01434632.1988.9994334](http://dx.doi.org/10.1080/01434632.1988.9994334).

Tomlin R. S., Villa V., 1994, “Attention in Cognitive Science and Second Language Acquisition”, *Studies in Second Language Acquisition*, 16: 183-203.

Truscott J., Sharwood Smith M., 2011, “Input, intake, and consciousness: The quest for a theoretical foundation”, in *Studies in Second Language Acquisition*, 33, pp. 497-528 <https://doi.org/10.1017/S0272263111000295>.

Verspoor M., De Bot K., & Lowie W. (Eds.), 2011, *A dynamic approach to second language*

development: Methods and techniques (Vol. 29). John Benjamins Publishing.

Yelland G. W., Pollard J., Mercuri A., 1993, “The metalinguistic benefits of limited contact with a second language”, *Applied Psycholinguistics*, 14: 423-444.