

# Antonio Iniesta

## CURRICULUM VITAE

### 1. PERSONAL INFORMATION



Name	Antonio José Martínez Iniesta		
ID	20885267W	Age	28 (09/14/1994)
ORCID iD	0000-0001-5122-5566		
Email	antonio.martineziniesta@mcgill.ca antoniomartinez_iniesta@hotmail.com		
Phone	+1 (579) 421-6784		
Citizenship	Spanish		

### 2. POSITION

Faculty	McGill University
Department	Department of Psychology
Position	<b>Postdoctoral researcher</b>
Starting date	10/15/22
Research Group	Language and Multilingualism Lab! ( <a href="https://www.mcgill.ca/language-lab/">https://www.mcgill.ca/language-lab/</a> )
Supervisors	Professor Debra Titone

### 3. ACADEMIC TRAINING

Qualification	University	Years
Ph.D. IN COGNITIVE PSYCHOLOGY <sup>a</sup>	University of Granada	2017/2022
Master in COGNITIVE NEUROSCIENCE	University of Granada	2016/2017
Degree in SPEECH THERAPY <sup>b</sup>	University of Granada	2012/2016

**a.** International doctoral degree.

**b.** Recognition of best record of Speech Therapy Degree awarded in 2016.

### 4. MOST RELEVANT MERITS

## 4.1. PUBLICATIONS

Titone, D., Hernández-Rivera, E., Iniesta, A., Beatty-Martínez, A.L., Gullifer, W.J. (2023) Are language–cognition interactions bigger than a breadbox? Integrative modeling and design space thinking temper simplistic questions about causally dense phenomena. *Behavioral and Brain Sciences* 1–2. doi:10.1017/ S0140525X23002145

*Abstract:* We affirm the utility of integrative modeling, according to which it is advantageous to move beyond “one-at-a-time binary paradigms” through studies that position themselves within realistic multidimensional design spaces. We extend the integrative modeling approach to a target domain with which we are familiar, the consequences of bilingualism on mind and brain, often referred to as the “bilingual advantage.” In doing so, we highlight work from our group consistent with integrative modeling.

Iniesta, A., Rivera, M., Paolieri, D., & Bajo, T., (*in preparation*). Development of L1-L2 naming skills in a monolingual context: Evidence from children and adolescents. *Cognitive Development: Social and cultural contexts where multilingualism interacts with development*.

*Abstract:* When bilinguals produce a message, the representation of the non-target language is activated in parallel. Although the consequences of language coactivation on language processing has been broadly explored, this study addressed the role of language and cognitive development on L1 and L2 language production in children and adolescents. Adolescence has been pointed out as a time of qualitative developmental changes that might influence language processing in the native language (L1), the acquisition of a second language (L2) and the interaction between the two languages (L1/L2). In this study, two groups of unbalanced Spanish (L1)-English (L2) speakers from two different age groups performed a picture-naming task in L1 and L2, including cognates (e.g., piano [EN] - piano [SP]), and non-cognate nouns (e.g., house [EN] - casa [SP]). The first group were children in sixth-grade of primary school (11-12 yo) and the second group were adolescents in fourth-grade of secondary school (15-16 yo) in the Spanish system. Naming latencies (RTs), accuracy (ACC) and event-related brain potentials (ERPs) were measured. The electrophysiological indexes facilitate understanding of the nature of the differences between children and adolescents, which may be attributed to differences in cognitive control [P2-N2], and/or to differences in lexical access [N400]. Better performance is found in ACC and RTs when naming cognate vs. non-cognate words in the L2 for both age groups. However, cognate facilitation in the L1 was found just in the RTs of the younger group. We can conclude that there is a facilitation effect when naming cognate words compared to non-cognate words, that is affected by the English-proficiency and the age of the participants. Overall, these results evidence the impact of the participant’s developmental stage and their linguistic context in the interactions between cognitive and linguistic variables during language processing.

Iniesta, A., Mansouri, N., Hernández-Rivera, E., & Titone, D. (*in preparation*). How Does the Native Language influence reading in the Second Language? Exploring the impact of writing scripts similarities and language use on L2 reading.

*Abstract:* Roughly half of the world’s population speaks more than one language, and a large percentage of those people read in their second language. Thus, an open question is whether and how people’s multilingual knowledge impacts their second language reading processes. Here, we investigate whether competing influences from people’s first language (L1) writing system (i.e., alphabetic, logographic, or alphasyllabic) can impact reading comprehension and fluency when English (which has an alphabetic writing system) is a second language (L2). To address this question, we explored a variety of reading English comprehension measures, and English language usage in a subsample of 1949 healthy adult participants from a larger global database (ENRO; Siegelman et al., 2023).

The results showed differences between participants from different L1 writing scripts on L2 English Reading Proficiency and on Reaction Times on L2 English Reading Proficiency Tasks. In addition, we found that L2 English reading usage had an effect on reading performance and, more importantly, reduced the differences between L1 writing scripts on L2 English reading proficiency. These findings help to understand the influence of L1 writing scripts on L2 reading, and how people's multilingual knowledge and experience mutually constrain each other in the context of L2 reading. They also suggest further avenues of theoretical and empirical advancement.

Iniesta, A., Beatty-Martínez, A., Yang, M., Itzhak, I., Gullifer, J., & Titone, D. (*in preparation*). Leveraging Social Network Data to Ground Multilingual Background Measures: The Case of General and Socially Based Language Entropy. *Canadian Journal of Experimental Psychology. Network science in experimental psychology*

*Abstract:* Multilingualism research suggests that language diversity across social contexts is central for regulating how languages are represented, accessed, and controlled, over and above basic measures such as L2 age of language acquisition, and self-reported ability in each language (e.g., Gullifer & Titone, 2020; Tiv et al., 2021; Titone & Tiv, 2022). However, a gap in this literature is the availability of ecologically valid measures that quantify socially realistic individual differences, which are also convenient to ascertain. Here, we use social network data, which has high ecological validity but is lengthy to ascertain, to ground a language background measure that is arguably easier to collect -- language entropy. Language entropy indexes balance or diversity in the use of two or more languages (Gullifer et al., 2018; Gullifer & Titone, 2020). Language entropy can track compartmentalized vs. integrated language use generally (i.e., using global language usage proportions), and in a socially based manner (i.e., by averaging language use across different social spheres). In both cases, lower language entropy values reflect lower language diversity (i.e., greater compartmentalization), whereas higher language entropy values reflect higher language diversity (i.e., lower compartmentalization and greater cross-language integration). In this paper, we examine the links between language entropy (both general and socially-specific), and more detailed social network measures, and also how both predict language mixing behavior. This work will provide crucial data about how two sociolinguistically distinct groups vary using both language entropy and detailed social network measures. It will thus assess whether simple individual difference measures (i.e., general and socially based language entropy) are comparably valid proxy measures for more detailed social network information. Finally, this work will advance socioecological models of language use (reviewed in Tiv et al., 2021; Tiv & Titone, 2022), both theoretically and methodologically.

Rivera, M., Paolieri, D., Iniesta, A., Pérez, A. I., & Bajo, T. (2023). Second language acquisition of grammatical rules: The effects of learning condition, rule difficulty, and executive function. *Bilingualism: Language and Cognition*, 1-14. doi: 10.1017/S1366728922000815

*Abstract:* Learning a new language is an important goal that many individuals find difficulty in achieving, particularly during adulthood. Recently, several factors have related this variability to different extrinsic (context of learning or complexity) and intrinsic (cognitive abilities) factors, but the interaction between them is barely unknown. In two experiments, participants learned grammatical English rules in intentional-explicit and incidental-implicit learning contexts. Overall results of this study indicated that intentional contexts benefitted rule-learning, as compared to incidental contexts. This benefit was mainly present when participants were learning an easy rule; intentional and incidental learning did not differ in the case of participants learning a difficult rule. Moreover, individual differences in executive functioning predicted successful learning in interaction with the difficulty of the context. When learning an easy rule, local attention and proactive control facilitated intentional learning. In contrast, when participants were learning a complex rule, incidental learning was enhanced by lower involvement of proactive control.

Rivera, M., Paolieri, D., Iniesta, A., Bajo, T. (2022). Cognitive and contextual factors modulating grammar learning at older ages. *Frontiers in aging neuroscience*, 979. doi: 10.3389/fnagi.2022.943392

*Abstract:* Second language learning has been shown more difficult for older than younger adults, however, the research trying to identify the sources of difficulty and possible modulating factors is scarce. Extrinsic (learning condition and complexity) and intrinsic factors (executive control) have been related to L2-grammar learning in younger adults. In the present study, we aim to assess whether extrinsic and intrinsic factors are also modulating grammar learning in older adults. We compared the learning performance of younger and older adults in a L2 learning task. 162 Spanish native-speakers (81 young) learnt Japañol (Japanese syntax and Spanish lexicon) in either an intentional (metalinguistic explanation) or an incidental (comprehension of sentences) context. The complexity of the sentences was also manipulated by introducing (or not) a subordinate clause. Individual differences in proactivity were measured with the AX-CPT task. After the learning phase, participants performed a Grammatical Judgment Task where they answered if the presented sentences were grammatically correct. No differences between older and younger adults were found. Overall, better results were found for the intentional-condition than for the incidental-condition. A significant interaction between learning context and the proactivity index in the AX-CPT task showed that more proactive participants were better when learning in the incidental-condition. These results suggest that both extrinsic and intrinsic factors are important during language learning and that they equally affect younger and older adults.

Rossi, E., Iniesta, A., & Nakamura, M., (2022). Age, bilingualism, and cognition in translators and interpreters. In Ferreira, A., & Schwieter, J. W. (Ed.), *The Routledge Handbook of Translation, Interpreting, and Bilingualism*.

*Abstract:* In this chapter, we review and discuss the relevant literature at the intersection of neurocognitive changes across the lifespan, bilingualism and translators and interpreters (TIs). We begin by explaining Translating and Interpreting (TI) as informed by bilingualism, focusing on models that capture the underlying cognitive mechanisms theorized to be important for language control. We then present models of cognitive and neural aging, emphasizing the potential role bilingual experiences may have on implications for the mind and brain in older adulthood. We also include a brief review of changes in language processing in older adulthood e.g., production and comprehension. We continue with a section on the cognitive implications of bilingualism and language in aging and the evidence supporting models of neural/cognitive reserves.

Overall, we propose an argument towards unifying these findings and considering TIs from the perspective of bilingualism. Our goal is to employ a dynamic perspective of TI by applying neural and cognitive models of monolingual and bi/multilingual language across the lifespan with an emphasis on healthy aging. We highlight how future research should consider the intersection of bilingualism, TI and aging.

Iniesta, A., Bajo, M. T., Rivera, M., & Paolieri, D. (2022). Transfer effects from language processing to visual attention dynamics: The impact of orthographic transparency. *British Journal of Psychology*, 00, 1–26. doi: 10.1111/bjop.12598INIESTA ETA1.26

*Abstract.* The consistency between letters and sounds varies across languages. These differences have been proposed to be associated with different reading mechanisms (lexical vs. phonological), processing grain sizes (coarse vs. fine) and attentional windows (whole words vs. individual letters). This study aimed to extend this idea to writing to dictation. For that purpose, we evaluated whether the use of different types of processing has a differential impact on local windowing attention: phonological (local) processing in a transparent language (Spanish) and lexical (global) processing of an opaque language (English). Spanish and English monolinguals (Experiment 1) and Spanish–English bilinguals (Experiment 2) performed a writing to dictation task followed by a global–local task. The first key performance showed a critical dissociation between languages: the response times (RTs) from the Spanish writing to dictation task was modulated by word length, whereas the RTs from the English writing to dictation task was modulated by word frequency and age of acquisition, as evidence that language transparency biases processing towards phonological or lexical strategies. In addition, after a Spanish task, participants more efficiently processed local information, which resulted in both the bene-

fit of global congruent information and the reduced cost of incongruent global information. Additionally, the results showed that bilinguals adapt their attentional processing depending on the orthographic transparency

Iniesta, A., Rossi, E., Bajo, M.T., & Paolieri, D. (2021). The influence of cross-linguistic similarity and language background on writing to dictation. *Frontiers in Psychology, 4280. Research Topic: Modulators of Cross-Language Influences in Learning and Processing.* doi: 10.3389/fpsyg.2021.679956.

*Abstract.* This study used a word dictation task to examine the influence of a variety of factors on word writing production: cognate status (cognate vs. non-cognate words), orthographic (OS) and phonological similarity (PS) within the set of cognate words, and language learning background [late bilinguals (LBs) with academic literacy and formal instruction in English and Spanish, and heritage speakers (HSs) with academic literacy and formal instruction only in English]. Both accuracy and reaction times for the first key pressed by participants (indicating lexical access), and the time required to type the rest of the word after the first keypress (indicating sublexical processing) were assessed. The results revealed an effect of PS on the dictation task, particularly for the first keypress. That is, cognates with high PS were processed faster than cognates with low PS. In contrast to reading studies in which PS only revealed a significant effect when the OS between languages was high (O+P+ vs. O+P-), in the dictation to writing task, the phonology had a more general effect across all conditions, regardless of the level of OS. On the other hand, OS tended to be more influential for typing the rest of the word. This pattern is interpreted as indicating the importance of phonology (and PS in cognates) for initial lexical retrieval when the input is aural. In addition, the role of OS and PS during co-activation was different between groups probably due to the participants' linguistic learning environment. Concretely, HSs were found to show relatively lower OS effects, which is attributed to the greater emphasis on spoken language in their Spanish language learning experiences, compared to the formal education received by the LBs. Thus, the study demonstrates that PS can influence lexical processing of cognates, as long as the task demands specifically require phonological processing, and that variations in language learning experiences also modulate lexical processing in bilinguals.

Iniesta, A., Paolieri, D., Serrano, F., & Bajo, M.T. (2021). Bilingual writing coactivation: lexical and sublexical processing in a word dictation task. *Bilingualism: Language and Cognition, 1-16.* doi: 10.1017/S1366728921000274

*Abstract.* Bilinguals' two languages seem to be coactivated in parallel during reading, speaking, and listening. However, this coactivation in writing has been scarcely studied. This study aimed to assess orthographic coactivation during spelling-to-dictation. We took advantage of the presence of polyvalent graphemes in Spanish (one phonological representation with two orthographic specifications, e.g., /b/ for both the graphemes v and b) to manipulate orthographic congruency. Spanish-English bilinguals were presented with cross-linguistic congruent (movement-movimiento) and incongruent words (government-gobierno) for a dictation task. The time and accuracy to initiate writing and to type the rest-of-word (lexical and sublexical processing) were recorded in both the native language (L1) and the second language (L2). Results revealed no differences between conditions in monolinguals. Bilinguals showed a congruency and language interaction with better performance for congruent stimuli, which was evident from the beginning of typing in L2. Language coactivation and lexical-sublexical interaction during bilinguals' writing are discussed.

Iniesta, A., & Serrano, F. (2020). Writing intervention: an integrated program for Primary School children. *Journal of Psychologists and Counsellors in Schools, 30, 1-9.* doi: 10.1017/jgc.2019.35

*Abstract.* This article describes an intervention program to improve writing skills, intended to be a useful tool for everyday remedial work in primary school. The design was based on an initial review of the approaches most often used for writing intervention and identification of the main concerns for such intervention; namely, the use of direct and explicit instructions, the importance of feedback, recommended levels of intervention, the main content to consider, and use of motivating activities to get the student engaged or even to enjoy the intervention. All these considerations guided decision-making about the

appropriate features that would ensure an effective intervention in children with general and specific writing difficulties. The intervention program follows evidence-based practice strategies and may be useful for educational professionals in primary school, acknowledging that the program needs to be experimentally evaluated.

### **Degree and Master's final projects**

- Design and validation of an intervention program to improve writing and orthography (September 2016).
- Writing intervention in school-age: the study of the behavioral and neural bases (September 2017).

*Abstract.* People with orthographic and writing impairments have important consequences in their scholarly and social life. Orthographic errors are a persistent problem in dyslexic students, despite the reading impairments compensation. This work reports the results of a study that evaluated the implementation of a 4-weeks intervention program. This is an intervention program to improve writing skills, intended to be a useful tool for everyday remedial work in primary school. The design was based on an initial review of the approaches most often used for writing intervention and identification of the main concerns for such intervention; namely, the use of direct and explicit instructions, the importance of feedback, recommended levels of intervention, the main content to consider, and use of motivating activities to get the student engaged or even to enjoy the intervention. All these considerations guided decision-making about the appropriate features that would ensure an effective intervention in children with general and specific writing difficulties. The intervention program follows evidence-based practice strategies and may be useful for educational professionals in primary school, acknowledging that the program needs to be experimentally evaluated. On the one hand, from a psychoeducational perspective, 36 students (20 dyslexics) participated in the study. The results showed an improvement in phonology and prosody, orthographic skills and emotional aspects. After the intervention program, the dyslexic group reduced the differences from the control group.

On the other hand, from a neuroscientific perspective, some dyslexic students ( $n = 11$ ) participated in an ERP study. The main of this study was focused on the error detection during orthographic verification. Words with appropriate (correct) and inappropriate (incorrect) spelling were included in an ERN (Error-related negativity) paradigm. Difficulties in errors detection were evidenced.

## **4.2. TEACHING AND MENTORING EXPERIENCE**

\* 45 hours in the Department of Experimental Psychology during the academic year 2018-2019, in Memory and Representation (Degree in Psychology) and Alternative Communication Systems (Degree in Speech Therapy) courses.

\* 30 hours in the Department of Experimental Psychology during the academic year 2019-2020, in Psychomotricity and Language (Degree in Speech Therapy) and Cognitive Ergonomics (Degree in Psychology) courses.

\* 38 hours in the Department of Experimental Psychology during the academic year 2020-2021, in Alternative Communication Systems (Degree in Speech Therapy), Cognitive Ergonomics and Language Psychology (Degree in Psychology) courses.

\* Teaching innovation group in the degree of Speech Therapy course 2018/19 and Psychology in 2020/2021

\* Participation in the mentoring program (in the University of Granada), coaching undergraduate and master students to carry out their final undergraduate and master's projects respectively.

\* Mentoring undergraduate, master and graduate students as the postdoctoral researcher in Language and Multilingualism Lab.

### **4.3. CLINICAL EXPERIENCE**

In collaboration with the department of developmental psychology (specifically with the research group LEE- Reading and Writing in Spanish), I collaborated for 5 months in the longitudinal project "Eldel" (enhancing literacy development in European languages; PSI2010-21983-C02-01), in which we evaluated with standardized measures the reading of children and adolescents in the province of Granada (Spain), and several skills associated with reading and writing such as working memory, rhythm, fluency, visual discrimination, and rapid naming.

I served for 4 months (more than 250 hours) as a practicum student in the rehabilitation department of the hospital virgen de las nieves (Granada), in the area of speech therapy: speech, language and communication. We mainly performed evaluation and intensive therapy for voice disorders (mainly dysphonia, and paralysis), and patients with brain damage (i.e., ischemic stroke, and tumors) resulting in global, broca's, or anomic aphasia. In addition, I served for 2 months (more than 100 hours) as a practicum student in the Speech Therapy department of Caja Granada School. We mainly performed evaluation and school treatments for speech disorders (phonological disorders), learning disorders (dyslexia, dyscalculia), voice disorders (mainly dysphonia, and paralysis), and patients with brain damage (i.e., ischemic stroke, and tumors). We also implement interventions for children with cochlear implants and fluency disorders.

### **4.4. MOBILITY AND INTERNATIONALIZATION**

#### TEMPORAL MOBILITY GRANT FOR Ph.D.' STUDENTS

*(granted by the Spanish Ministry, for University of Florida)*

Strengthen the internationalization of scientific training and technical capacity.

Start date: 09/01/2019

Finish date: 12/01/2019

#### Results:

- A published paper in *Frontiers of Psychology*, with Dr. Rossi. In this study, participants carried out writing to dictation task to examine the influence of a variety of factors on word writing production: cognate status (cognate vs. non-cognate words), orthographic (OS), and phonological similarity (PS) within the set of cognate words, and language learning background

(late bilinguals [LBs] with academic literacy and formal instruction in English and Spanish, and heritage speakers [HSs] with academic literacy and formal instruction only in English).

- A chapter for a book called “The Routledge Handbook of Translation, Interpreting, and Bilingualism”. “Rossi, E., Iniesta, A., & Nakamura, M., (2022). Age, bilingualism, and cognition in translators and interpreters”
- 4 ongoing projects on the role of cognitive processing style (specifically global vs. local attentional patterns) in lexical access during reading and/or language comprehension.

#### PARTNERSHIPS FOR INTERNATIONAL RESEARCH AND EDUCATION (PIRE)

Ongoing annual collaborative projects with:

- UCI (University of California Irvine) with Dr. Kroll
- The Pennsylvania State University with Dr. Carlson

BILINGUALISM MATTERS at UGR (See <http://wpd.ugr.es/~bilingualismmatters/>)

Bilingualism Matters is an International Organization that was originally founded as a Center of Excellence at the University of Edinburgh. At the moment there are 28 international branches all around the world. The goal of this organization is to raise awareness about the social, cognitive and linguistic benefits of bilingualism and second language learning, and to share our expertise (in an accessible format) with schools, policy-makers and the local community (see below).

### 4.5. RESEARCH GRANTS AND FELLOWSHIPS

#### RESEARCH FELLOWSHIP FOR UNDERGRADUATE STUDENTS- 2000€

Design and validation of an intervention program to improve writing and orthographic skills

Start date: 10/01/2015 Finish date: 09/30/2016

#### RESEARCH FELLOWSHIP FOR MASTER’S STUDENTS- 3000€

Behavioral and neural evidence of writing intervention in children with dyslexia: Is there a deficit during error detection?

Start date: 11/01/2016 Finish date: 11/01/2017

#### UNIVERSITY TEACHER/RESEARCHER TRAINING GRANTS FOR Ph.D.’ STUDENTS- 75.000€

Doctoral programs for the attainment of the title of Doctor and the acquisition of university teaching skills in any area of scientific knowledge.

Start date: 11/01/2017 Finish date: 02/28/2022



## 4.6. RESEARCH PROJECTS

Antonio Iniesta, and Memory and Language research group.

**How do several languages coexist in the brain? Transferring the investigation from the laboratory to the community (reference fct-19-15358; Grant for the promotion of scientific, technological and innovation culture. FECYT, 6000€)**

*Summary.* The objective of this project is to share knowledge about language learning with the different social groups that experience the benefits and challenges of bilingualism in their daily lives. To achieve this purpose, we are carrying out several dissemination activities that will transfer our scientific knowledge to different groups in an innovative, simple and close way. A transversal objective of this project would be to reflect the relevance of women in science. We conducted the following events: Outreach events in educational centers including (i) workshops in educational centers, and (ii) webinar for families ("One brain, two languages: myths and realities"). We also held several open days of our laboratories for different schools and families. In order to broaden our impact in online dissemination, we designed a series of scientific dissemination videos in which we deal with different topics in a rigorous and consistent tone. With this initiative, we generate a material easily accessible to the general population through our Youtube channel (In Spanish with English subtitles). For example; Science from within <https://www.youtube.com/watch?v=vIj0oa7ARvM>, Debunking the Myths of Bilingualism <https://www.youtube.com/watch?v=7ITM4QBiqmM&t=109s>, and Relaying evidence from the lab to our society <https://www.youtube.com/watch?v=wFmG1jFtgGk&t=236s>

Antonio Iniesta & Debra Titone.

**How do multilingual adults compose interpersonal communications? The impact of language use on typing production (Submitted to Social Sciences and Humanities Research Council of Canada. Insight Development Grants. 75000\$).**

*Summary.* Worldwide, speaking several languages is the rule rather than the exception. Increasing global diversity within Canada and around the world is making speaking and writing in multiple languages mandatory for professional and social success. One of the functions of language is communication with other people to communicate the decision that we make as a fundamental tool for our professional and social success. However, cognitive processes underlying reasoning and making decisions seems to be different when we are using a language that we master very well (dominant language), or in a language in which we are less proficient (non-dominant language). Models of decision-making do not specifically account for decision outcomes that arise from impairments that can appear during language processing, neglecting some years of research that have pointed out that knowing several languages have some consequences for language processing and cognition. Language processing in bilinguals is generally associated with processing costs most significant during the processing in the less dominant/L2 language. While psycholinguistic studies frequently studied the consequences of multilingualism on spoken production and reading comprehension, little attention is dedicated to this issue in writing processing, despite the impact of writing on academic, professional, and social contexts. The evidence of processing cost in writing or typing multilingual production is limited and based on isolated word typing. This grant uses email texts and social media posts as a tool for studying interpersonally relevant communication guided by typing, and multilingualism as a relevant population that uses these channels of communication. Therefore, this project wants to explore how multilingual adults compose emails and social media posts in L1/dominant and L2/non-dominant languages. In this way, we try to address text writing production in professional y personal social contexts to fill the gap in bilingualism and writing literature.

Multilingualism is a complex and multifaceted life experience occurring within a diverse social environment. Language diversity is frequently studied in the domain of sociolinguistics, and more recently in psycholinguistics trying to understand the impact of diversity of social language use and how it influences language processing. Therefore, we plan to explore the role

of language use during typing production from a dual perspective. On the one hand, from an online or dynamic perspective as the communicative context can change dynamically, with the participation of different interlocutors, the use of language has to be adapted to the characteristics of the interlocutors to achieve more effective communication. A central feature of multilingual communication is individuals' ability to fluently accommodate their interlocutors. We plan to study the role of specific e-mail addresses or social media users, in typing production. On the other hand, from an offline or general perspective language use in terms of balance or diversity in the use of two or more languages has been proposed to be quantified using language entropy. Entropy can be used to continuously track individual differences related to compartmentalized vs. integrated language use. We plan to explore the impact of individual differences in the general use of languages for communication (general language entropy) and the specific use of languages for writing (specific writing entropy) on emails and social media posts composition. Having a multidimensional view of writing is relevant to change biases in the face of writing difficulties and orthographic and typographical inaccuracies in academic and professional spheres.

**We are also running different projects associated with idiomatic expressions processing during typing production in native language L1 vs. second language L2, and the role of chunking individual variability to explore the interaction between central and peripheral typing processing. In addition, we are studying how bilinguals process mentalizing or theory of mind information in the dominant vs non-dominant languages using eye-tracking and EEG techniques to disentangle the metalinguistic vs. cognitive subprocesses underlying the outcomes. Finally, we are analyzing a big global project to explore the role of L1 orthographic transparency on L2 English reading comprehension in alphabetic orthographies.**

#### 4.6. CONFERENCES

**Authors:** Iniesta, A., Bajo, M.T., Rivera, M., Titone, D., & Paolieri, D. **Title:** Transfer effects from language processing to visual attention dynamics: The impact of orthographic transparency. **Modality:** Poster. **Congress:** 24th Annual Neuropsychology Day and Brenda Milner Lecture: Functional Specializations in the Cortex in Humans: Which, When, and Why? **Place:** Montreal, Canada. **Year:** 2023

**Authors:** Iniesta, A., & Titone, D. **Title:** Sociolinguistic context impacts on language use, and cognition: rethinking multilingual experience. **Modality:** KEYNOTE. **Congress:** iBrain Erasmus International Symposium on Heritage Bilingualism. **Place:** Hyderabad, India. **Year:** 2023

**Authors:** Iniesta, A., Rossi, E., Paolieri, D., Titone, D., & Bajo, M.T. **Title:** The impact of learning background in bilingual writing. **Modality:** Poster. **Congress:** PsychoShorts 2023. **Place:** Ottawa, Canada. **Year:** 2023

**Authors:** Mansuri, N., Iniesta, A., Hernandez-Rivera, E., Palma, P., & Titone, D. **Title:** How does a Person's L1 Writing Script Impact L2 Reading in a Same or Different Script?. **Modality:** Poster. **Congress:** 33rd Annual Meeting of the CSBBCS /SCSCCC. **Place:** Ontario, Canada. **Year:** 2023

**Authors:** Basoglu, E., Hodgins, V., Iniesta, A., & Titone, D. **Title:** Exploring the trait-like and state-like effects on mentalizing. **Modality:** Poster. **Congress:** Centre for Research on Brain, Language and Music CRBLM Scientific Day. **Place:** Montreal, Canada. **Year:** 2023

**Authors:** Casado, A., Pérez, A., Iniesta, A., Benigno, G., Arribas, J., Bajo, T. Paolieri, D. **Title:** The Bi-Multilingualism Prism. **Modality:** Poster. **Congress:** - CIMCYC 10th Anniversary Research Conferences, Past, Present and Future. **Place:** Granada, Spain. **Year:** 2023

**Authors:** Bajo, T., Bellergada, M., Iniesta, A., López-Rojas, C., Marful, A., Paolieri, D., Reyes, M., & Rivera, M. **Title:** Disseminating from scientific evidence. **Modality:** Poster. **Congress:** - V Jornadas de Investigación del CIMCYC. **Place:** Granada, Spain. **Year:** 2022

**Authors:** Bellergada, M., Iniesta, A., López-Rojas, C., Reyes, M., & Rivera, M. **Title:** How do multiple languages coexist in the brain? Transferring research from the laboratory to society. **Modality:** Poster. **Congress:** - IV Jornadas de Investigación del CIMCYC. **Place:** Granada, Spain. **Year:** 2021

**Authors:** Iniesta, A., Rossi, E., Bajo, M.T., & Paolieri, D. **Title:** The interplay of orthographic and phonological similarity during bilingual writing production. **Modality:** Poster. **Congress:** XV International Symposium of Psycholinguistics. **Place:** Online. **Year:** 2021.

**Authors:** Iniesta, A., Rossi, E., Bajo, M.T. & Paolieri, D. **Title:** The cognate effect in word writing: evidence from late bilinguals and heritage speakers. **Modality:** Poster. **Congress:** Virtual Conference of Experimental Psychology SEPEX. **Place:** Online. **Year:** 2021.

**Authors:** Iniesta, A., Paolieri, D., & Bajo, M.T. **Title:** Attentional effects associated with the processing of transparent and opaque languages. **Modality:** Poster. **Congress:** Bilingualism Matters Research Symposium. **Place:** University of Edinburgh/Online. **Year:** 2020.

**Authors:** Iniesta, A. **Title:** Writing production in bilingualism. **Modality:** Conference. **Place:** Ph.D. Program of University of Granada, Spain. **Year:** 2020.

**Authors:** Iniesta, A. **Title:** Writing Production in Bilingualism. **Modality:** Conference. Linguistic Seminar in the University of Florida. **Place:** Gainesville, USA. **Year:** 2019.

**Authors:** Iniesta, A., Paolieri, D., Serrano, F., & Bajo, M.T. **Title:** Cross-linguistic orthographic effect in bilingual writing production. **Modality:** Poster. **Congress:** 5th Annual Florida Psycholinguistics Meeting. **Place:** Miami, USA. **Year:** 2019.

**Authors:** Iniesta, A., Paolieri, D., Serrano, F., & Bajo, M.T. **Title:** Bilingual writing co-activation: lexical and orthographic processing in a word dictation task. **Modality:** Poster. **Congress:** XIV International Symposium of Psycholinguistics. **Place:** Tarragona, Spain. **Year:** 2019.

**Authors:** Iniesta, A., Rivera, M., García-Gómez, A., & Quesada, T. **Title:** Lights and Shadows of bilingualism. **Modality:** communication. **Congress:** Conference for Researchers in Training Promoting Interdisciplinarity [III Jornadas de Investigadores en Formación Fomentando la Interdisciplinarietà (JIFFI)]. **Place:** Granada, Spain. **Year:** 2019.

**Authors:** Iniesta, A., Andras, F., Bajo, M.T., & Paolieri, D. **Title:** Orthographic co-activation in bilingual writing. **Modality:** communication. **Congress:** Conference for Researchers in Training Promoting Interdisciplinarity [II Jornadas de Investigadores en Formación Fomentando la Interdisciplinarietà (JIFFI)]. **Place:** Granada, Spain. **Year:** 2018.

**Authors:** Mata, S. Iniesta, A., & Serrano, F. **Title:** Assessment of the Learning Potential of Writing. **Modality:** poster. **Congress:** XXX Internacional AELFA-IF/CLPV Congress [Spanish Association of Speech Therapy, Phoniatics and Audiology]. **Place:** Granada, Spain. **Year:** 2018

**Authors:** Iniesta, A., Conejero, A., Pozuelos, J.P., Rueda, R., & Serrano, F. **Title:** Study of the neural correlates associated with spelling decisions. Evidence in students with learning difficulties. **Modality:** poster. **Congress:** XXX Internacional AELFA-IF/CLPV Congress [Spanish Association of Speech Therapy, Phoniatics and Audiology]. **Place:** Granada, Spain. **Year:** 2018

**Authors:** Iniesta, A., Ruz, A., & Serrano, F. **Title:** Intervention for the improvement of writing and spelling in students with special educational needs (SEN). **Modality:** communication. **Congress:** II International Congress 2017: Society, Education and Inclusion. **Place:** Granada, Spain. **Year:** 2017.

**Authors:** Iniesta, A., and Serrano, F. **Title:** Design of an intervention program for the improvement of writing and spelling. **Modality:** poster. **Congress:** XXX International Congress AELFA-IF/CLPV (Spanish Association of Speech Therapy, Phoniatics and Audiology). **Place:** Bilbao, Spain. **Year:** 2016.

### **Invited talks**

I was invited to present my work in the labs of the professor Kroll (UC Irvine Faculty) and professor Titone (McGill University).

#### **4.7. TRANSVERSAL SKILLS**

- Reviewer of scientific manuscripts in high-impact journals such as Frontiers of Psychology, Applied psycholinguistic, Brain and Language, and Translational Issues in Psychological Science.
- External reviewer for the National Science Foundation: NSF
- Data analysis skills (R, SPSS, JASP).
- Experience with presential and online data collection (E-prime 2.0 and 3.0, Gorilla, Finding Five and Open Sesame).
- knowledge of EEG (Neuroscan and CURRY for adult participants and Geodesic Sensor Net for children. EEGLAB and MATLAB and scripts for data processing and analysis).
- Strong interpersonal and communication skills. Extensive experience in teamwork and team management. Promote a comfortable, friendly, and familiar work environment.
- Experience with writing grant applications and funding capture (national fundings for my current position and research and dissemination projects as co-PI.).
- Passion for new projects and challenges. High resilience and tolerance to frustration.
- Spanish native speaker.
- A very open mind towards new cultures and new realities.
- A very direct and transparent person.
- Good work-life balance with mental health as a priority.