

CLIL and Social and Emotional Learning in Early Bilingual Education: Compatible and Mutually Beneficial

Louisa Mortimore

Faculty of Education, Universidad Internacional de la Rioja, Logroño, Spain;
Department of Modern Languages, Universidad de Alcalá de Henares, Alcalá de Henares, Spain

Abstract—This article focuses on a key issue for the holistic education of the young child in the bilingual classroom: the optimal development of social and emotional competence when learning takes place in another language. Social and emotional learning (SEL) has been referred to as “the substance of education itself” by the National Commission on Social, Emotional, and Academic Development (2019, p. 6) and research shows that the beneficial effects on the wellbeing of young children are deep-reaching and long-lasting. The recent growth of bilingual education in early childhood has propelled Content and Integrated Learning (CLIL) to the forefront of teacher training, methodology, and research into the teaching and learning processes of young children in bilingual classrooms. However, there is a dearth of research investigating the development of SEL in early CLIL. In this context, this article reviews and brings together existing literature of SEL and CLIL and argues that the main tenets of both are highly compatible. Examination of research highlights the key role played by classroom climate for the effective implementation of SEL through CLIL, and the challenges faced through an absence of specific legislation and teacher training. Finally, this article proposes how pedagogical strategies might be successfully established within the lower and pre-primary CLIL classroom that are mutually beneficial to both the development of bilingual education and young children’s social and emotional wellbeing.

Index Terms—Bilingual education, CLIL, early years pedagogy, social and emotional learning, classroom climate

I. INTRODUCTION

Social and emotional learning (SEL) has been referred to as “the substance of education itself” by the National Commission on Social, Emotional, and Academic Development (2019, p. 6), highlighting the central role it plays, or arguably should play, in educational systems. SEL is the process through which all people acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions, achieve goals, feel, and show empathy, establish and maintain supportive relationships, and make responsible and caring decisions (CASEL, 2021). SEL is essential for our mental health and wellbeing, and its early development in children is closely linked to their future wellness. This affects multiple domains such as education, employment, and mental health (Jones et al., 2015), with extensive research highlighting the optimization of benefits when SEL is implemented from a young age (e.g., Denham et al., 2012; Ornaghi et al., 2019).

Similarly, recent years have seen an increased understanding of the opportunities afforded by the learning of a foreign language from a very young age. Combined with the benefits of contextualized language use (e.g., Cross, 2012), increased pupil engagement (e.g., Meyer et al., 2018) and ludic activities (Coyle et al., 2010), the implementation of Content and Language Integrated Learning (CLIL) has experienced exponential growth over the fifteen years throughout much of Europe. This growth is especially notable within Spain, where various local educational policies (e.g., in Madrid and Andalusia) have frequently made specific reference to the application of CLIL in bilingual classroom methodology. More recently, these educational policies have been extended to include pre-primary, resulting in children starting their formal education within a bilingual classroom.

This widespread implementation of early bilingual education creates the need to consider how teaching methodologies for young children can encompass SEL when much of the teaching takes place in an additional language. In this regard, there is a dearth of empirical studies researching the use of SEL in bilingual contexts, and most especially in the earlier stages of education, when research shows the development of SEL to be crucial (e.g., Zinsser & Dusenbury, 2015).

The present article starts by exploring the importance of SEL and examining the existing literature as to why an early start in SEL is essential for long-term well-being and why it should be developed in all schools. Secondly, recognizing the extensive implementation of bilingual education in infant and primary, the article analyses how SEL can be developed within the reality of an early CLIL classroom. Amongst the many similarities identified between SEL and CLIL, this paper proposes that the teacher’s ability to create a supportive class climate is key. An encouraging and

constructive classroom climate is essential in supporting multiple aspects of learning (especially when this takes place in another language), in addition to mental and emotional wellbeing. Subsequently, the article considers the provision for SEL and CLIL in educational legislation and teacher training, and the resulting challenges for the effective implementation of SEL through CLIL. Finally, the article concludes that CLIL is not only highly compatible with SEL, but their simultaneous development may be mutually beneficial for the holistic development of young children in bilingual classrooms.

II. THE MAIN TENETS FOR SEL IN EARLY EDUCATION

SEL refers to acquiring the skills to understand and regulate one's emotions and develop healthy social relationships (e.g., Denham et al., 2012). A growing body of literature evidences the benefits of SEL in young children, recognizing infancy and childhood as periods of greatly accelerated growth, development, and learning. During early childhood, the acquisition of the competences to recognize and manage emotions and develop prosocial behaviors is critical for long term impact on the child's wellbeing and mental health.

A. *SEL and Its Effects on Brain Development in Young Children*

The early emotional experiences of young children become literally embedded in the architecture of their brains as they develop (National Scientific Council on the Developing Child, 2004, 2011, 2016). The increased neuroplasticity during early childhood renders the brain particularly sensitive to remodeling by environmental factors (Maccari et al., 2014), and it is a time of significant neurological maturation in many areas of the brain, such as the prefrontal cortex (PFC) (Bunge & Wright, 2007; Tsujimoto, 2008), hippocampus, and the amygdala.

The PFC is the region of the brain located just behind the human forehead and is responsible for executive functioning, such as reasoning, emotion regulation, and sustained and selective attention. These are critical functions for successful academic achievement, and the development of prosocial behaviors and supportive and caring relationships (e.g., Werchan et al., 2016). The hippocampus is closely involved in essential memory functions, while the amygdala is often referred to as the emotional center of the brain. A smaller, less reactive amygdala is associated with reduced reactivity and greater emotional stability (e.g., Wu et al., 2016). In contrast, early childhood is associated with a more reactive amygdala and low emotion regulation, as the child has not yet learnt how to manage emotions such as anger (Laible et al., 2014). As the child progressively develops social and emotional competences, their ability to manage their emotions increases.

Conversely, early life stress and emotional adversity can have negative effects lasting into adulthood (Pechtel & Pizzagalli, 2011). As Maccari et al. (2014) state, early negative experiences can affect adult mental health, and alter mechanisms of resilience to stress across the entire lifespan of that person.

B. *SEL and School Interventions in Early Education*

Social and emotional competence supports the social relationships and school success of the pre-primary child and increased resilience when faced with uncertain and emotionally challenging circumstances (Denham & Basset, 2019). Young children may be more sensitive to stressful environments than older children, and therefore more sensitive to the benefits of positive social engagement and reduced stress (Lin, 2018).

The optimum development of social and emotional competences in children, and especially young children, is closely correlated with increased mental health and wellbeing in later life. Indeed, the Center on the Developing Child at Harvard University (2016) underscores that the capacities developed during childhood are the building blocks of a well-functioning, prosperous, and sustainable society: from positive school achievement and economic self-sufficiency to responsible adult behavior and lifelong health.

In this very real way, exposure to positive environmental stimuli- such as that found in a supportive classroom- is correlated with beneficial brain development. SEL interventions in schools have reported highly beneficial results in the short, mid, and long term. Durlak et al. (2010) analyzed 69 after-school programs and found close correlation with increased school grades and academic performance, and significant improvement in self-perceptions, bonding to school, and positive social behaviors.

Likewise, Durlak et al. (2011) analyzed 213 school-based programs involving 270,000 children, and reported significantly improved social and emotional skills, attitudes, behavior, and academic performance. Similarly, Jones et al. (2015) found statistically significant associations between increased social and emotional skill development in pre-primary with gains in education, employment, mental health, and reduced criminal activity and substance abuse after 13-19 years.

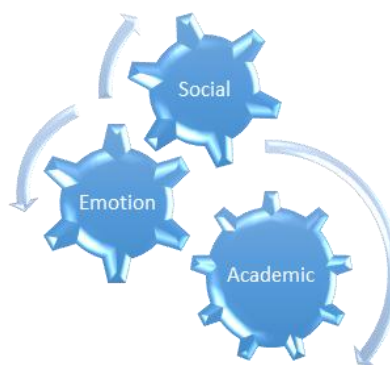


Figure 1. Research (e.g., Durlak et al., 2010, 2011; Jones et al., 2015) Evidences the Close Relationship Between Social and Emotional Skills, and Academic Performance

Given the developmental stage of the young child, SEL interventions need to be designed specifically for this age group. In contrast to later educational stages, children in pre- and early primary are more dependent on external support and adult management to regulate their behaviors and emotions. Hence, adult support and positive classroom management play a particularly central role in promoting social-emotional competencies (Bierman & Motamedi, 2015).

III. WHY DEVELOP SEL THROUGH EARLY CLIL?

Alongside the need to develop SEL is the current educational reality in many parts of Europe, and especially Spain. Early education has been encompassed by the growing trend of bilingual education. Over the last two decades, CLIL has been promoted as the leading approach by the European Commission (Council of Europe, 2005; Eurydice, 2007), and within Spain at a regional level by the local educational authorities.

This exponential growth of CLIL has seen, within the Madrid region alone, over a twenty-fold increase in the number of infant and primary bilingual schools in the seventeen years since the bilingual program was first introduced by the local educational authority. An initial cohort of 26 infant and primary schools in 2004-2005 (BOCM, 2004) has grown to 615 state and charter infant and primary bilingual schools in 2020-2021 (*Consejería de Educación, Universidades, Ciencia y Portavocó de la Comunidad de Madrid*, 2021, p. 35). It is therefore essential to consider how the social and emotional needs of young children are met in a CLIL learning context.

A. The Main Tenets for Developing SEL Through CLIL

CLIL, as an umbrella term, brings together an amalgamation of diverse and effective teaching praxis (Council of Europe, 2005, p. 5). However, the extensive implementation of CLIL is not free of controversy: while very few studies argue against the beneficial effects of incorporating SEL into the classroom, the same cannot be said of CLIL and bilingual education. Having started from a point of high social acceptance -almost CLIL fever-, in recent years CLIL has started to take more of a battering. Pérez Cañado has referred to this as the “pendulum effect”, with the “CLIL craze” swinging to the “CLIL conundrum” (2016, p. 21).

Notwithstanding, there is a considerable body of research that coincides with the effectiveness of techniques advocated as part of a successful CLIL approach to bilingual teaching. These include techniques that promote social and emotional competence within CLIL, such as the extensive use of team, cooperative and collaborative work (Sierra, 2011) and pupil interaction (Pavón Vázquez et al., 2015). Research furthermore suggests that CLIL favors dialogic teaching (Li & Zhang, 2022; Nieto Moreno de Diezmas, 2012), increased scaffolding (Carloni, 2018; Mahan, 2022) and motivation (e.g., Doiz et al., 2014), all of which arguably stimulate pupil participation and active learning. The use of mindfulness and experiential learning can be a powerful tool to support SEL in CLIL contexts in pre-primary (Mortimore, in press) and primary (Mortimore, 2017a, 2017b).

With very young children in CLIL, common techniques also include play (Coyle et al., 2010), singing, use of toys, visuals, and manipulatives (Andúgar & Cortina-Pérez, 2018). These can be used alongside activities that promote psychomotor development such as movement, dance, and drama. Physical Education (P.E.) classes can be a powerful tool for both SEL and CLIL: they stimulate the use of team collaboration and goal orientation, and encourage internalization through repeated practice (Kahn et al., 2019). In young children, the development of motor skills is linked to executive functioning and academic achievement such as reading, writing and math skills (McClelland & Cameron, 2019). In older children (average age 13), Fernández-Barrionuevo et al. (2021) propose that CLIL in P.E. supports the growth of autonomy, through the use of teaching techniques such as offering encouragement, informative feedback, being open to answering questions and allowing the pupils freedom in how to express themselves in the additional language.

B. CLIL, SEL and Classroom Climate: A Close Relationship?

A key factor to the successful implementation of SEL and improved wellbeing is the classroom climate that young children are exposed to for a sizeable portion of their waking hours. Definitions of classroom climate largely refer to teacher-pupil and peer relationships (Ingemarson et al., 2019). Diverse factors affect classroom climate, including both teacher-centered and learner-centered issues. The former includes class management and teacher attitude and praise. The latter ranges from pupil motivation to attitude, behavior, and disruption.

While the exact terms used may vary, there is a small but growing body of research highlighting the importance of classroom climate. In this respect, this paper points out that a healthy classroom climate is a key factor in the optimum development of both SEL (e.g., Jennings & Greenberg, 2009; Merritt et al., 2012; Schonert-Reichl, 2017; Schonert-Reichl et al., 2017) and CLIL (e.g., Gáñez Fernández, 2020; Ohlbecker & Wegner, 2019; Sierra 2011). Research underscores that classroom climate can have a significant impact on the socioemotional adjustment of the pupil, their attitude, and their academic performance (Sher-Censor et al., 2019). Jennings and Greenberg (2009) explicitly attest to the beneficial effects of the prosocial classroom, as creating a climate that is both conducive to learning while promoting positive developmental outcomes among students. Similarly, results from a study of 47 pre-primary classrooms emphasized the importance of response and sensitive interactions in promoting prosocial behaviors (Pakarinen et al., 2020).

The classroom, and in particular the language classroom, has frequently been recognized as a high stress-inducing context, the latter being associated with the negative phenomenon of foreign language anxiety (e.g., Simons et al., 2019). It is undeniable that pupils under the age of 16 have not chosen to be at school, nor have they chosen to be in their teachers' classes. They have not chosen their classmates and may have no relationship with their peers outside of this environment. They have not chosen "to do as they are told". Equally, they have no, or very little, voice in the materials they will cover, the books they will read and study, or the activities they will be obliged to participate in. Children, and young children especially, are, to all effects and purposes, rendered powerless within their learning environment. Within a language classroom, they may additionally be required to communicate in a language they do not know or feel comfortable communicating in. In a CLIL learning context, this is extended outside of the EFL classroom and encompasses many other curricular areas.

In this context, it is vital that teachers are aware of the need to create a supportive and constructive atmosphere and employ techniques that stimulate engagement and motivation to promote both learning *and* wellbeing. Teachers can have a dramatic effect on the class "mood", with research reporting a positive correlation between teacher disposition and pupil attitude (Alonso-Tapia & Ruiz-Díaz, 2022). Extensive research suggests that CLIL contexts are less stress-inducing than their non-CLIL counterparts (e.g., De Smet et al., 2018; Simons et al., 2019; among others). Studies furthermore report enhanced pupil autonomy, responsibility, sense of belonging (Halbach & Iwaniec, 2020) and increased motivation (e.g., Pfenniger, 2018). Additionally, student-centered methodologies such as increased project and task-based learning, scaffolding techniques, and formative assessment are particularly capitalized upon in the CLIL classroom (Pérez Cañado, 2021).

One of the major criticisms of bilingual education in this regard is a reduced attention to diversity (e.g., Rumlich, 2014). However, attention to diversity is frequently lacking across educational contexts, and is not limited to bilingual settings (Durán Martínez et al., 2020). Supporting diversity is not easy, and many pre-primary programs do not do it successfully (Sanders & Downer, 2012).

Nevertheless, recent years appear to have seen an increased awareness of the need for attention to diversity in the bilingual classroom. Specifically, the project Attention to Diversity in Bilingual Education (ADiBE), a European initiative headed by the team at Universidad de Jaén, was aimed at addressing the need for inclusive CLIL practices. The project produced teacher-friendly materials aimed at creating a more inclusive and supportive bilingual classroom (Casas Pedrosa & Rascón Moreno, 2021). Interestingly, it may be that very heterogeneous CLIL classrooms could be doubly beneficial: Ohlberger and Wagner (2019) found that greater diversity in CLIL classrooms also resulted in pupils self-reporting reduced anxiety and increased self-efficacy.

In this line, Durán Martínez et al. (2020) attest to the importance of teachers having both the awareness *and* the necessary knowledge as to how to create an inclusive class that provides a supportive and constructive atmosphere. The close relationship between the successful development of SEL through early CLIL, and a supportive classroom climate is illustrated below in Figure 2:

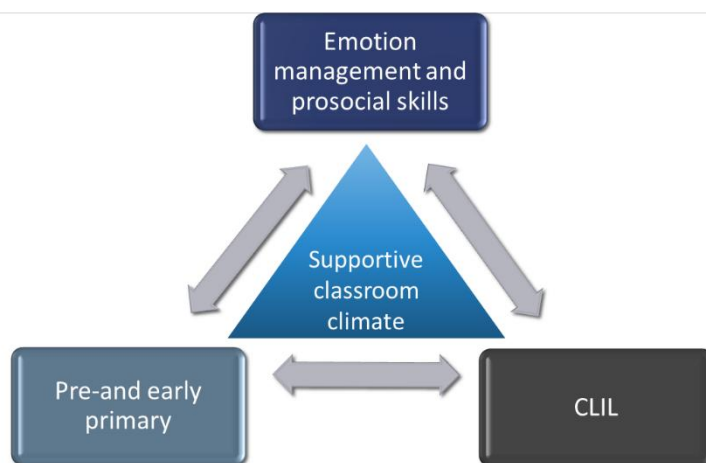


Figure 2. Relationship Between Pre-primary CLIL and the Development of Social and Emotional Skills

As can be seen in the figure above, without a supportive classroom climate, the other elements fail to flourish. Non-supportive classroom climates and conflictive teacher-pupil relationships are correlated with reduced stress regulation and an increase in negative pupil behaviors in early primary classrooms (Ahnert et al., 2012), and are a predicting factor to learning stress and burnout (Yang & Chen, 2016). In addition, learning is adversely affected by increased stress and anxiety levels (Moriceau et al., 2009), which affect critical areas such as attention, engagement, and memory (Schwabe et al., 2008). Indeed, the need to address these issues has become even more pressing with the aftereffects of the Covid-19 pandemic with children suffering an increased risk of negative mood, anxiety, attention difficulties and social challenges (Teal Raffaele et al., 2021). Specific teacher training that helps prepare teachers to deal with emotionally challenging classroom situations is key.

IV. CHALLENGES FOR IMPLEMENTING SEL THROUGH CLIL: THE GAPS IN LEGISLATION AND TEACHER TRAINING

Despite the high compatibility of SEL and CLIL, challenges exist that can impede the development of social and emotional competence within CLIL contexts, and indeed amongst its monolingual counterparts. These include the gap, or at least somewhat haphazard provision of specific legislation and teacher training for SEL and CLIL.

A. SEL: Absence of Specific Legislation and Framework

As with all aspects of education, legislation is key to the development of SEL through CLIL as it lays the foundation to *how* it is implemented and the *extent* of that implementation. In this regard, we need to briefly review existing legislation for both SEL and for CLIL contexts. This has been done within the specific context of Spain, where education is devolved to each autonomous community, though all regional legislation is subject to national law.

Generally, Spanish educational law, such as the 2020 Law of Education, known as the LOMLOE (*Ley Orgánica 3/2020, por la que se modifica la Ley Orgánica 2/2006*), and the earlier Royal Decree of 2006 (*Real Decreto 1630/2006*) which specifically regulates pre-primary education, make reference to the need to develop social and emotional competence. This is done, however, without providing a framework within which it may take place. A similar provision for SEL is echoed in regional laws.

Regarding bilingual education and CLIL, the situation is very different. The aforementioned national laws make scant reference to the development of language and the provision for CLIL learning contexts. In contrast, autonomous communities have each implanted their own bilingual programs, resulting in a mishmash of 17 different models (Andúgar et al., 2019), with significant differences between them (López Rupérez et al., 2019). This lack of national consensus in the implementation of bilingual education, combined with a lack of detailed provision for the development of social and emotional competences has most certainly not facilitated the teaching and learning of SEL through CLIL.

B. Specific Teacher Training in CLIL and SEL

Similarly, teacher training is a central issue for the successful implementation of SEL and CLIL. Standard teacher training often fails to include specific preparation on both SEL (e.g., CASEL, 2021) and bilingual education (e.g., Pavón Vázquez & Ellison, 2013; Pérez Cañado, 2018). This was summed up by Greenberg et al., who reported the often “chaotic nature of the field of teacher preparation” (2014, p. 93) in a nationwide survey in the US.

While teachers are pivotal to the success of SEL and are uniquely positioned to develop it, there is a lack of exposure in their training to modules that are specifically related to social, emotional, and behavioral problems (Center on the Developing Child at Harvard University, 2016; Jennings & Greenberg, 2009; State et al., 2011). Within bilingual education, a similar problem exists: no specific teacher training is required for teachers to participate in bilingual programs. Standard teacher training only includes a very reduced number of, often optional, modules of CLIL (Vinuesa, 2021). In this regard, Pérez Cañado (2018) encapsulates the solution with four points: i) a need for the modification of

existing degrees in teacher training to guarantee sufficient methodological training; ii) specific CLIL preparation for university teacher trainers; iii) the creation of new degrees in bilingual education; and iv) tailored courses for pre- and in-service teachers.

V. WAYS FORWARD FOR SEL THROUGH CLIL: PEDAGOGICAL STRATEGIES

While challenges to the extensive implementation of SEL through CLIL may exist, there are certain pedagogical strategies that a teacher can incorporate to build a foundation for the effective development of social and emotional competence with young children through CLIL:

- Be S.A.F.E. (CASEL, 2021; Durlak et al., 2010, 2011): an acronym for four different elements that all SEL instruction and activities should include:
 - **Sequenced**- activities are connected and coordinated to foster skills development;
 - **Active**- active forms of learning to help students master new skills;
 - **Focused**- containing activities that clearly emphasize developing personal and social skills;
 - **Explicit**- targeting specific social and emotional skills.

Mortimore (2017a; 2023) reports that these elements are highly compatible with CLIL teaching and learning strategies in pre-primary and primary.

- Build resilience through play: self-directed and active play helps children build core skills to cope with stress and resilience and is one of the most important strategies to help children develop social relationships, test their limits, adapt to new circumstances and cope with adverse circumstances (Center on the Developing Child at Harvard University, 2016). Appropriate play with peers is a singular opportunity to promote the social, emotional, cognitive, language, and self-regulation skills that build executive function and a prosocial brain (Yogman et al., 2018).
- Incorporate CLIL strategies to the maximum: active learner-centered activities such as collaborative, cooperative, and project-based learning. Like play, these are classroom equivalents that help build prosocial brains, engagement, autonomy, and self-regulation.
- Create a supportive and constructive learning environment through dialogic teaching and active and constructive teacher-pupil feedback to develop high levels of pupil-pupil and teacher-pupil interaction (Church et al., 2001). This feedback should include four essential steps, as reported by Swinson and Harrop (2012): i) make instructions clear and specific; ii) look for and explicitly acknowledge pupils who are following those instructions; iii) frequently acknowledge and praise any pupil when he/she is doing whatever they have been requested to do; iv) know how to deal with inappropriate behavior.
- Integrate physical activity and movement into everyday teaching and learning, especially within the classroom as an alternative to sitting at the table or desk. This can be optimized by teaching the subject of Physical Education (primary) and the development of psychomotor skills (pre-primary) through CLIL.

VI. CONCLUSION

With the educational reality of extensive bilingual education for all, there is an obligation to ensure that young children in bilingual classrooms have sufficient opportunities to fully develop social and emotional competences from an early age. The need for social and emotional learning in bilingual pre-primary gains further relevance when we consider that a significant portion of the school day takes place in the children's L2, a language of which they may feasibly have no, or very limited, knowledge.

CLIL pre-primary classrooms, with a focus on contextualized ludic activities (Coyle et al., 2010) and active, learner-centered methodologies appear highly compatible with the development of social and emotional skills. Furthermore, this article suggests that CLIL practices can be adapted to explicitly promote SEL, and specifically recommends that a constructive and supportive classroom atmosphere favors the implementation of CLIL and the development of SEL in pre-primary. In this regard, this paper concludes that all educational systems should, and can, explicitly include SEL modules. All stakeholders share the responsibility to ensure its optimum development for pupils' lasting wellbeing. The responsibility of the development of social and emotional competences should not fall solely on direct caregivers such as parents and teachers.

Nevertheless, there are significant challenges to overcome. Key factors, such as the explicit inclusion of SEL in legislation across educational contexts are noticeably absent. Educational authorities need to make specific provision for the development of SEL in all educational settings, including pre-primary CLIL. Furthermore, in line with existing school-wide programs for the implementation of CLIL, a similar provision for SEL where all pupils can participate in SEL specific activities would be highly beneficial.

Likewise, this article concurs with existing literature for the need for CLIL teacher training programs. In this regard, given the mutual compatibility of SEL and CLIL as proposed in this paper, the author suggests that pre-service and in-service bilingual teacher training programs are ideally positioned to encompass specific SEL modules that specifically deal with teaching SEL in CLIL educational contexts.

REFERENCES

- [1] Ahnert, L., Harwardt-Heinecke, E., Kappler, G., Eckstein-Madry, T., & Milatz, A. (2012). Student–teacher relationships and classroom climate in first grade: How do they relate to students' stress regulation? *Attachment & human development*, 14(3), 249-263.
- [2] Alonso-Tapia, J. & Ruiz-Díaz, M. (2022). School climate and teachers' motivational variables: effects on teacher satisfaction and classroom motivational climate perceived by middle school students. A cross-cultural study. *Psicología educativa. Revista de los Psicólogos de la Educación*, 28(2), 151-163.
- [3] Andúgar, A., & Cortina-Pérez, B. (2018). EFL teachers' reflections on their teaching practice in Spanish preschools: A focus on motivation. *Preschool Bilingual Education*. 219-244. DOI: 10.1007/978-3-319-77228-8_8
- [4] Andúgar, A., Cortina-Pérez, B., & Tornel, M. (2019). Tratamiento de la lengua extranjera en Educación Infantil en las distintas comunidades autónomas españolas [Treatment of the foreign language in Early Childhood Education in the different Spanish autonomous communities]. *Profesorado, Revista de Currículum y Formación del Profesorado*, 23(1), 467-487.
- [5] Bierman, K. L., & Motamedi, M. (2015). Social and emotional learning programs for preschool children. In J. Durlak, C. Domitrovich, R. P. Weissberg, & T. Gullotta (Eds.). *Handbook of social and emotional learning: Research and practice* (pp. 135-151).
- [6] BOCM (2004). *Orden 4902/2004, de 2 de noviembre 2004, de la Consejería de Educación de la Comunidad de Madrid* [Order 4902/2004, of 2nd November 2004 of the Madrid Educational Authority]. Boletín Oficial de la Comunidad de Madrid, de 10 de noviembre de 2004, 268. http://www.madrid.org/dat_capital/deinteres/impresos_pdf/orden_bilingues_0405.pdf
- [7] Bunge, S. & Wright, S. (2007). Neurodevelopmental changes in working memory and cognitive control. *Current opinion in neurobiology*, 17(2), 243-250. <https://doi.org/10.1016/j.conb.2007.02.005>
- [8] Carloni, G. (2018). English-taught programs and scaffolding in CLIL settings. *La didattica delle lingue nel millennio*. 483-498. DOI: 10.30687/978-88-6969-227-7/029
- [9] Casas Pedrosa, A. V., & Rascón Moreno, D. (2021). Attention to diversity in bilingual education: Student and teacher perspectives in Spain. *International Journal of Bilingual Education and Bilingualism*, 1-18. <https://doi.org/10.1080/13670050.2021.1997902>
- [10] Center on the Developing Child at Harvard University (2016). *From Best Practices to Breakthrough Impacts: A Science-Based Approach to Building a More Promising Future for Young Children and Families*. <http://www.developingchild.harvard.edu>
- [11] Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of classroom environment, achievement goals, and achievement outcomes. *Journal of Educational Psychology*, 93(1), 43-54. <https://doi.org/10.1037/0022-0663.93.1.43>.
- [12] Collaborative for Academic, Social, and Emotional Learning (CASEL). (2021). *2011-2021: 10 Years of Social and Emotional Learning in U.S. School Districts*. <https://casel.org/cdi-ten-year-report/>
- [13] Consejería de Educación, Universidades, Ciencia y Portavocía de la Comunidad de Madrid, (2021). *Datos y Cifras de la Educación 2021-2022* [Data and Figures of Education 2021-2022].
- [14] Coyle, D., Hood, P. & Marsh, D. (2010). *CLIL*. Cambridge University Press.
- [15] Council of Europe (22nd November 2005). Project D3 – CLIL matrix. The CLIL quality matrix. *Commission of the European Communities*.
- [16] Cross, R. (2012). Creative in finding creativity in the curriculum: The CLIL second language classroom. *The Australian Educational Researcher*, 39(4), 431-445. <https://doi.org/10.1007/s13384-012-0074-8>
- [17] De Smet, A., Mettwie, L., Galand, B., Hilgsmann, P., & Van Mensel, L. (2018). Classroom anxiety and enjoyment in CLIL and non-CLIL: Does the target language matter? *Studies in Second Language Learning and Teaching*, 8(1), 47-71.
- [18] Denham, S., Bassett, H., Mincic, M., Kalb, S., Way, E., Wyatt, T., & Segal, Y. (2012). Social-emotional learning profiles of preschoolers' early school success: A person-centered approach. *Learning and individual differences*, 22(2), 178-189. <https://doi.org/10.1016/j.lindif.2011.05.001>
- [19] Denham, S. A., & Bassett, H. H. (2019). Early childhood teachers' socialization of children's emotional competence. *Journal of Research in Innovative Teaching & Learning*, 12(2), 133-150. <https://doi.org/10.1108/JRIT-01-2019-0007>
- [20] Doiz, A., Lasagabaster, D., & Sierra, J. M. (2014). CLIL and motivation: The effect of individual and contextual variables. *The Language Learning Journal*, 42(2), 209-224.
- [21] Durán Martínez, R., Martín Pastor, M. E., & Martínez Abad, F. (2020). ¿Es inclusiva la enseñanza bilingüe? Análisis de la presencia y apoyos en los alumnos con necesidades específicas de apoyo educativo [Is bilingual education inclusive? Analysis of the presence and support of students with specific educational support needs]. *Bordón: Revista de Pedagogía*, 72(2), 65-82. <http://hdl.handle.net/10366/146762>
- [22] Durlak, J., Weissberg, R., Dymnicki, A., Taylor, R., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432. <http://www.jstor.org/stable/29782838>
- [23] Durlak, J., Weissberg, R., & Pachan, M. (2010). A Meta-Analysis of After-School Programs That Seek to Promote Personal and Social Skills in Children and Adolescents. *American Journal of Community Psychology*, 45(3), 294-309
- [24] Eurydice. (2006). *Content and Language Integrated Learning (CLIL) at school in Europe*. <https://op.europa.eu/en/publication-detail/-/publication/756ebdaa-f694-44e4-8409-21eef02c9b9b>
- [25] Fernández-Barrionuevo, E., Baena-Extremera, A., & Villoria-Prieto, J. (2021). La educación física bilingüe como forma de motivar hacia el aprendizaje en una lengua extranjera. estudio preliminar basado en el modelo trans-contextual [Bilingual physical education as a way to motivate learning in a foreign language. preliminary study based on the trans-contextual model]. *Retos*, 42, 244-255. <https://doi.org/10.47197/retos.v42i0.77382>
- [26] Gámez Fernández, M.C. (2020) El aula bilingüe desde una mirada plena: una aproximación a mindfulness en contextos AICLE [The bilingual classroom from a full perspective: an approach to mindfulness in CLIL contexts]. In M.E. Gámez Parra & C.A. (Eds.), *Educación bilingüe: perspectivas desde el sistema educativo español* (pp. 219-234). Fundación Pública Andaluza Centro de Estudios Andaluces.

- [27] Greenberg, J., McKee, A., & Walsh, K. (2013). *Teacher prep review: A review of the nation's teacher preparation programs*. <http://dx.doi.org/10.2139/ssrn.2353894>
- [28] Halbach, A., & Iwaniec, J. (2022). Responsible, competent and with a sense of belonging: an explanation for the purported levelling effect of CLIL. *International Journal of Bilingual Education and Bilingualism*, 25(5), 1609-1623.
- [29] Ingemarson, M., Rosendahl, I., Bodin, M., & Birgegård, A. (2019). Teacher's use of praise, clarity of school rules and classroom climate: Comparing classroom compositions in terms of disruptive students. *Social Psychology of Education*, 23(1), 217-232. <https://doi.org/10.1007/s11218-019-09520-7>
- [30] Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491-525. <https://doi.org/10.3102/0034654308325693>
- [31] Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: the relationship between kindergarten social competence and future wellness. *American Journal of Public Health*, 105(11), 2283-2290. <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2015.302630>
- [32] Kahn, J., Bailey, R., & Jones, S. (2019). *Coaching social & emotional skills in youth sports*. Aspen Institute. <http://files.eric.ed.gov/fulltext/ED603548.pdf>
- [33] Laible, D., Carlo, G., Murphy, T., Augustine, M., & Roesch, S. (2014). Predicting children's prosocial and co-operative behavior from their temperamental profiles: A person-centered approach. *Social Development*, 23(4), 734-752. <https://doi.org/10.1111/sode.12072>
- [34] *Ley Orgánica 3/2020, de 29 de diciembre, por la que se modifica la Ley Orgánica 2/2006 (LOMLOE)* [Organic Law of 2020 Amending the Organic Law of Education of 2006]. Boletín Oficial del Estado (BOE), 340 de 30 de diciembre de 2020. <https://www.boe.es/eli/es/lo/2020/12/29/3>
- [35] Li, D. & Zhang, L. (2022). Exploring teacher scaffolding in a CLIL-framed EFL intensive reading class: a classroom discourse analysis approach. *Language Teaching Research*, 26(3), 333-360.
- [36] Lin, C. (2018). The relationships between child well-being, caregiving stress, and social engagement among informal and formal kinship care families. *Children and Youth Services Review*, 93, 203-216.
- [37] López Rupérez, F., Gisbert da Cruz, X., García García, I., Vinuesa Benítez, V. (2019). *Evaluación comparada de la calidad normativa de los programas de enseñanza bilingüe en España: evidencias y recomendaciones* [Comparative evaluation of the quality of the requirements of bilingual education programs in Spain: evidence and recommendations]. Universidad Camilo José Cela.
- [38] Maccari, S., Krugers, H., Morley-Fletcher, S., Szyf, M., & Brunton, P. (2014). The Consequences of Early-Life Adversity: Neurobiological, Behavioural and Epigenetic Adaptations. *Journal of Neuroendocrinology*, 26(10), 707-723.
- [39] Mahan, K.R. (2022). The comprehending teacher: Scaffolding in content and language integrated learning (CLIL). *The Language Learning Journal*, 50(1), 74-88. <https://doi.org/10.1080/09571736.2019.1705879>
- [40] McClelland, M. M., & Cameron, C. E. (2019). Developing together: The role of executive function and motor skills in children's early academic lives. *Early Childhood Research Quarterly*, 46, 142-151.
- [41] Merritt, E. G., Wanless, S. B., Rimm-Kaufman, S. E., Cameron, C., & Peugh, J. L. (2012). The contribution of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School psychology review*, 41(2), 141-159.
- [42] Meyer, O., Coyle, D., Imhof, M., & Connolly, T. (2018). Beyond CLIL: Fostering student and teacher engagement for personal growth and deeper learning. In J.D. Martínez Agudo (Ed.), *Emotions in second language teaching*, (pp. 277-297). Springer.
- [43] Moriceau, S., Shionoya, K., Jakubs, K., & Sullivan, R. (2009). Early-Life Stress Disrupts Attachment Learning: The Role of Amygdala Corticosterone, Locus Coeruleus Corticotropin Releasing Hormone, and Olfactory Bulb Norepinephrine. *The Journal of Neuroscience*, 29(50), 15745-15755.
- [44] Mortimore, L. (2017a). The importance of developing social and emotional learning (SEL) within the CLIL classroom, with special reference to Spain. *Encuentro: Revista de Investigación e Innovación en la Clase de Idiomas*, 26, 126-140. <http://hdl.handle.net/10017/35102>
- [45] Mortimore, L. (2017b). Mindfulness and Foreign Language Anxiety in the Bilingual Primary classroom. *Educación y Futuro: Revista de Investigación Aplicada y Experiencias Educativas*, 37, 15-43. <http://hdl.handle.net/11162/166901>
- [46] Mortimore, L. (2023). Chapter 6: A framework for developing social and emotional learning (SEL) in pre-primary CLIL. In A. Otto & B. Cortina-Pérez (Eds). *Handbook of CLIL in Pre-Primary Education*. Springer.
- [47] National Scientific Council on the Developing Child (2004). *Children's emotional development is built into the architecture of their brains: Working Paper No. 2*. <http://www.developingchild.net>
- [48] National Commission on Social, Emotional, and Academic Development. (2019). *A Nation at Hope. Recommendations from the National Commission. Final Report for The Aspen Institute*. <http://nationathope.org/report-from-the-nation-download/>
- [49] Nieto Moreno de Diezmas, E. (2012). CLIL and development of emotional competence. *Miscelánea: A Journal of English and American studies*, 45, 53-73.
- [50] Ohlberger, S., & Wegner, C. (2019). CLIL modules and their affective impact on students with high English anxiety and low self-efficacy. *Journal of Applied Language Studies*, 13(3), 1-15.
- [51] Ornaghi, V., Pepe, A., Agliati, A. & Grazzani, I. (2019). The contribution of emotion knowledge, language ability, and maternal emotion socialization style to explaining toddlers' emotion regulation. *Social Development*, 28(3), 581-598. <https://doi.org/10.1111/sode.12351>
- [52] Pakarinen, E., Lerkkanen, M., & Von Suchodoletz, A. (2020). Teacher emotional support in relation to social competence in preschool classrooms. *International Journal of Research & Method in Education*, 43(4), 444-460.
- [53] Pavón Vázquez, V. & Ellison, M. (2013). Examining teacher roles and competences in content and language integrated learning (CLIL). *Linguarum Arena*, 4, 65-78.
- [54] Pavón Vázquez, V., Prieto Molina, M., & Ávila López, J. (2015). Perceptions of teachers and students of the promotion of interaction through task-based activities in CLIL. *Porta Linguarum*, 23, 75-91 <http://digibug.ugr.es/handle/10481/53756>

- [55] Pechtel, P., & Pizzagalli, D. A. (2011). Effects of early life stress on cognitive and affective function: an integrated review of human literature. *Psychopharmacology*, 214(1), 55-70. <https://doi.org/10.1007/s00213-010-2009-2>
- [56] Pérez Cañado, M.L. (2016). From the CLIL craze to the CLIL conundrum: Addressing the current CLIL controversy. *Bellaterra Journal of Teaching & Learning Language & Literature*, 9(1), 9-31.
- [57] Pérez Cañado, M. L. (2018). Innovations and challenges in CLIL teacher training. *Theory Into Practice*, 57(3), 212-221.
- [58] Pérez Cañado, M. L. (2021). Inclusion and diversity in bilingual education: a European comparative study. *International Journal of Bilingual Education and Bilingualism*, special issue, ahead-of-print. <https://doi.org/10.1080/13670050.2021.2013770>
- [59] Pfenninger, S. E. (2016). All good things come in threes: Early English learning, CLIL and motivation in Switzerland. *Cahiers du Centre de Linguistique et des Sciences du Langage*, 48, 19-147.
- [60] Raffaele, C., Khosravi, P., Parker, A., Godovich, S., Rich, B., & Adleman, N. (2021). Social-Emotional Attention in School-Age Children: A Call for School-Based Intervention during COVID-19 and Distance Learning. *Children & Schools*, 43(2), 107-117.
- [61] *Real Decreto 1630/2006, de 29 de diciembre* [Royal Decree 1630 of 2006]. Boletín Oficial del Estado (4).
- [62] Rumlich, D. (2014). Chapter five: Prospective CLIL and non-CLIL students' interest in English (classes): A quasi-experimental study on German sixth graders. *Utrecht Studies in Language and Communication*, (28), 73-95. DOI: 10.1163/9789401210614_006
- [63] Sanders, K., & Downer, J. (2012). Predicting acceptance of diversity in pre-kindergarten classrooms. *Early Childhood Research Quarterly*, 27(3), 503-511.
- [64] Sher-Censor, E., Nahamias-Zlotolov, A., & Dolev, S. (2019). Special education teachers' narratives and attachment style: Associations with classroom emotional support. *Journal of Child and Family Studies*, 28(8), 2232-2242
- [65] Schonert-Reichl, K. A. (2017). Social and emotional learning and teachers. *The Future of Children*, 27(1), 137-155.
- [66] Schonert-Reichl, K. A., Kitil, M. J., & Hanson-Peterson, J. (2017). *To reach the students, teach the teachers: A national scan of teacher preparation and social & emotional learning*. <http://files.eric.ed.gov/fulltext/ED582029.pdf>
- [67] Schwabe, L., Bohringer, A., Chatterjee, M., & Schachinger, H. (2008). Effects of pre-learning stress on memory for neutral, positive and negative words: Different roles of cortisol and autonomic arousal. *Neurobiology of Learning and Memory*, 90(1), 44-53.
- [68] Sierra, J.M. (2011). CLIL and project work: contributions from the classroom. In Y. Ruiz de Zarobe, J.M. Sierra & F. Gallardo del Puerto (Eds.), *Content and Foreign Language Integrated Learning: Contributions to Multilingualism in European Contexts* (pp. 211-239). Peter Lang.
- [69] Simons, M., Vanhees, C., Smits, T., & Van De Putte, K. (2019). Remedying Foreign Language Anxiety through CLIL? A mixed-methods study with pupils, teachers and parents. *Revista de Lingüística y Lenguas Aplicadas* (14), 153-172.
- [70] State, T.M., Kern, L., Starosta, K. M., & Mukherjee, A. D. (2011). Elementary pre-service teacher preparation in the area of social, emotional, and behavioral problems. *School Mental Health*, 3(1), 13-23. <https://doi.org/10.1007/s12310-010-9044-3>
- [71] Swinson, J., & Harrop, A. (2012). *Positive psychology for teachers*. Taylor & Francis Group.
- [72] Tsujimoto, S. (2008). The Prefrontal Cortex: Functional Neural Development During Early Childhood. *The Neuroscientist*, 14(4), 345-358. <https://doi.org/10.1177/1073858408316002>
- [73] Vinuesa, V., (2021). Formación del profesorado AICLE: una asignatura pendiente [CLIL teacher training: a pending issue. Plenary]. *Congreso Internacional de Educación Bilingüe (CIEB)*, University of Valladolid, Spain.
- [74] Werchan, D. M., Collins, A. G., Frank, M. J., & Amso, D. (2016). Role of prefrontal cortex in learning and generalizing hierarchical rules in 8-month-old infants. *Journal of Neuroscience*, 36(40), 10314-10322.
- [75] Wu, M., Kujawa, A., Lu, L. H., Fitzgerald, D. A., Klumpp, H., Fitzgerald, K. D., Monk, C. S., & Phan, K. L. (2016). Age-related changes in amygdala-frontal connectivity during emotional face processing from childhood into young adulthood. *Human Brain Mapping*, 37(5), 1684-1695.
- [76] Yang, H., & Chen, J. (2016). Learning Perfectionism and Learning Burnout in a Primary School Student Sample: A Test of a Learning-Stress Mediation Model. *Journal of Child and Family Studies*, 25(1), 345-353.
- [77] Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., Michnick Golinkoff, M., Baum, R., Committee on Psychosocial Aspects of Child and Family Health & AAP Council on Communications and Media (2018). The power of play: A pediatric role in enhancing development in young children. *Pediatrics*, 142(3). <https://doi.org/10.1542/peds.2018-2058>
- [78] Zinsser, K. M., & Dusenbury, L. (2015). Recommendations for implementing the New Illinois early learning and development standards to affect classroom practices for social and emotional Learning. *Early Childhood Research & Practice*, 17(1). <https://ecrp.illinois.edu/v17n1/zinsser.html>



Louisa Mortimore specializes in the implementation of CLIL in schools, with a Cum Laude PhD researching CLIL in primary and two MA's in teaching English and bilingual education from Universidad de Alcalá in Spain, where she was distinguished with the Master's Excellence Award. She has postgraduate certificates of Expert in CLIL and Online University Teaching from Universidad Internacional de la Rioja. She has a BA Hons from Portsmouth University in Spanish Studies (1997) and is a member of ENTELEARN research group. Dr. Mortimore has coordinated an in-school bilingual project to reinforce CLIL in primary education at Universidad Internacional de la Rioja since 2015. She has also taught in the Degree of Psychology at Universidad Europea Miguel de Cervantes for 4 years, and a further 8 years as adjunct professor at the Universidad Europea de Madrid. She currently collaborates with the Universidad a Distancia de Madrid and the Universidad de Jaén in their Masters in Bilingual Education.