

Does multilingualism affect foreign language classroom anxiety and foreign language enjoyment?

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ABSTRACT: Multilingual foreign language learners have been found to typically experience less Foreign Language Classroom Anxiety (FLCA) and more Foreign Language Enjoyment (FLE) than their less multilingual peers. Since most existing research was based on single databases, authors had to be careful to avoid sweeping generalisations about the positive effect of multilingualism. In order to increase validity, the current paper will investigate the link between the degree of multilingualism and two learner emotions using three different existing databases that contained relevant data but where multilingualism was not part of the research questions in the subsequent papers. Participants who contributed to the first database were 360 FL learners in a Kuwaiti university, the second database included data from 502 English Foreign Language (EFL) learners in secondary schools and universities in Morocco, and the third database included data from 181 pre-teen EFL learners in secondary schools in France. Separate statistical analyses of the three databases confirmed that multilingualism was linked to significantly higher FLE in all three databases and to lower FLCA in two out of the three databases. This suggests that knowing more languages contributes to more positive and fewer negative emotions in the FL class.

Keywords: multilingualism, learner emotions, Foreign Language Classroom Anxiety, Foreign Language Enjoyment

El multilingüismo ¿afecta la ansiedad y el disfrute en el aula de lenguas extranjeras?

RESUMEN: Se ha descubierto que los estudiantes multilingües de lenguas extranjeras suelen experimentar menos ansiedad en el aula de lenguas extranjeras y más disfrute de la lengua extranjera que sus compañeros menos multilingües. Dado que la mayoría de las investigaciones existentes se basaban en bases de datos únicas, los autores debían tener cuidado de evitar generalizaciones radicales sobre el efecto positivo del multilingüismo. Para aumentar la validez, el presente artículo investigará el vínculo entre el grado de multilingüismo y dos emociones del alumno utilizando tres bases de datos diferentes que contenían datos relevantes pero donde el multilingüismo no formaba parte de las preguntas de investigación de los artículos posteriores. Los participantes que contribuyeron a la primera base de datos fueron 360 estudiantes de lengua extranjera en una universidad de Kuwait, la segunda base de datos incluyó datos de 502 estudiantes de lengua extranjera inglesa en escuelas secundarias y universidades de Marruecos, y la tercera base de datos incluyó datos de 181 preadolescentes que eran estudiantes de inglés como lengua extranjera en escuelas secundarias en Francia. Análisis estadísticos separados de las tres bases de datos confirmaron que el multilingüismo estaba relacionado con un disfrute significativamente mayor en las tres bases de datos y con un ansiedad más bajo en dos de las tres bases de datos. Esto sugiere que saber más idiomas contribuye a generar más emociones positivas y menos emociones negativas en la clase de lengua extranjera

Palabras clave: multilingüismo, emociones del alumno, ansiedad en el aula de lengua extranjera, disfrute de la lengua extranjera

1. INTRODUCTION

Georges Simenon's novel *Maigret au Picratt's* published in 1951, presents the legendary Belgian detective grappling with a classic mystery: Arlette, a young stripper in a nightclub in Pigalle, reports to the police in the early hours of the morning that she has overheard a customer talk about a plot to kill a "countess". Her being drunk, the police dismisses her but soon afterwards both Arlette and the Countess Von Farnheim are found strangled in similar ways in their respective apartments. Maigret will have to establish the connection between the two women and how they ended up dead. Researchers could be compared to academic versions of Maigret, called upon to explain unexpected and unexplained connections between independent and dependent variables. One of these "cases" emerged in Dewaele and MacIntyre (2014) where foreign language (FL) learners who knew more languages were found to enjoy their FL classes more and to suffer less from anxiety than their less multilingual peers. A follow-up study on the same database by Botes et al. (2020) confirmed that the degree of multilingualism shaped both positive and negative learner emotions. The "degree of multilingualism" is a slippery suspect because of difficulties in defining and describing it with sufficient precision. The lack of granularity and the amount of noise in data collected about "how many languages" an individual knows complicates the analyses and their interpretation. Indeed, empirical operationalization of a language count is fraught with difficulties. Berthele (2021) argues for a cognitive cultural model where dialects, registers and varieties for pluricentric languages can be counted. Individuals mastering different dialects, registers and varieties may find themselves at some distance from the prototypical centre of the category. He defines the prototypical multilingual as "a person whose repertoire includes more than two such languages" (p. 104). Multilingualism, for Berthele (2021) is both "ordinary

language use and nothing intrinsically special”, yet it is also “extraordinary, in the sense that a very large soft drink can be extra-large” as multilinguals have “an extra amount of language and of language variability at their disposal” (p. 112).

We are perfectly aware that there is no simple answer to any of the questions about multilingualism, that progress in this area is incremental and that causality is hard to establish. In other words —returning to *Maigret au Picratt's*— in academic work it is impossible to neatly identify the “killer variable”, and hear him/her out about his/her motives, but we can try and establish the *modus operandi*, that is, verify whether the relationship between multilingualism and learner emotions is consistent in different FL learner populations and speculate about possible causes.

2. LITERATURE REVIEW

2.1. Multilingual language learners

Debates about the challenges and opportunities of multilingualism have been going on for more than half a century and they are unlikely to die down any time soon (Grosjean, 2022). Failure to take the social-economic class of bilingual children into consideration in early research resulted in biased results with bilingualism being blamed for the poorer performance in comparison with monolingual peers (Grosjean, 2022). Once this confounding variable had been controlled for, researchers started to find small positive effects of multilingualism on cognition and later FL learning (cf. Adesope et al., 2010; Cenoz, 2003; Kemp, 2007). Defenders of monolingual ideologies view multilingualism as a threat to both individuals and societies (Pavlenko, 2005). They can do serious harm, especially if they are people in positions of authority like teachers in schools who consider the minority language spoken by pupils at home as an obstacle to their integration into mainstream society (Gkaintartzi & Tsokalidou, 2011). Recent research on multilingualism suggests that it does no harm but that the positive effects may be more diffuse and more subtle than previously thought (for an overview, see Cabrelli et al., 2023). One example of a recent null-result study in the field of multilingualism and cognition is Filippi et al. (2020). The researchers tested a total of 330 monolinguals and multilinguals aged between 7 and 80. Half of the multilinguals had acquired two languages from birth. The hypothesis about the multilinguals having an edge over the monolinguals in a metacognition task and two measures of executive function had to be rejected as no significant differences emerged between monolinguals and multilinguals.

The idea that learning a second language confers unique skills and metalinguistic awareness on the learner of a third language has found some support in the literature. Cummins et al. (2001) argued that to have any effect, FL learners needed to have reached a certain proficiency threshold. A rigorous longitudinal study by Berthele and Udry (2022) rejected this hypothesis. The authors collected data twice, with a one-year interval, from 115 quadrilingual primary school children in Swiss German-speaking Switzerland. They found that linguistic skills in previously learnt standard German and French conferred no significant advantage for the learning of English. General cognition (IQ, verbal and visual working memory) was a better predictor of performance in English and was correlated with linguistic abilities. In other words, high proficiency in L1 and L2 did not provide a multilingual boost in FL learning.

2.2. Multilingualism and Psychological Variables

Personality psychologists agree that personality is shaped by nature as well as nurture (Furnham & Heaven, 1999). Multilingualism (and multiculturalism) could qualify as part of “nurture”. Indeed, constant exposure to different languages and cultures from childhood is the kind of enduring social factor that leaves a trace in people’s personality profiles. In a study of 651 multilinguals from around the world, Dewaele and Botes (2020) found that participants knowing more languages were significantly more open-minded, more flexible and scored higher on the social initiative. This finding partly replicated earlier research by Dewaele and van Oudenhoven (2009) on 75 London teenagers where participants’ degree of multilingualism was positively linked to Openmindedness, marginally positively linked to Cultural Empathy and negatively linked to Emotional Stability. Similar results emerged in Korzilius et al.’s (2011) study on Dutch employees in an international enterprise, with Openmindedness being linked to multilingualism. However, Emotional Stability displayed a different relationship, as it was positively linked to a higher degree of multilingualism. Dewaele and Stavans (2014) investigated this further in the Israeli multilingual context. They found that the degree of multilingualism did not have any significant effect on participants’ personality profiles. However, a more fine-grained measure of multilingualism (the sum of total language use and the sum of total proficiency in various languages) showed that participants knowing several languages at a high proficiency level scored significantly higher on Open-mindedness, Social Initiative and Cultural Empathy. As Open-mindedness shares characteristics with the lower-order trait Tolerance of Ambiguity, it is not surprising that a high degree of multilingualism has been linked to a stronger tolerance of ambiguity (Dewaele & Li Wei, 2013) as well as increased cognitive empathy (Dewaele & Li Wei, 2012). However, more highly multilingual individuals were not found to be more emotionally intelligent than less multilingual individuals (Dewaele, 2021).

2.3. Foreign language learner emotions

A more holistic view of FL learner emotions was triggered by MacIntyre and Gregersen (2012) who introduced Positive Psychology into the field of applied linguistics where it has flourished ever since (Dewaele et al., 2019; MacIntyre et al., 2016, 2019; Mercer & Gregersen, 2023). Dewaele and MacIntyre (2014) took this new avenue of research, arguing that it was time to look beyond Foreign Language Classroom Anxiety (FLCA) -as had been done in the previous decades following the publication of Horwitz et al. (1986)- and to embrace positive emotions also. Dewaele and Saito (2022) argued that Positive Psychology also offers a perfect theoretical basis to reject the all-too-common deficit perspectives in FL teaching, where learners are often considered as failures for not reaching an unattainable “native speaker” standard and where the learners’ other languages are often viewed with suspicion.

The success of Horwitz et al. (1986) in the field of FL learning was undoubtedly linked to the psychometrically solid 33-item scale developed by the authors that was subsequently translated and adapted to various FL learner populations (for example, Al-Saraj, 2014). Horwitz et al. (1986) defined FLCA as “a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning arising from the uniqueness of the

language learning process” (p. 128). Horwitz (2017) talked about the “pink dress syndrome” to explain why FL learners experience anxiety in the FL class. A nice illustration of this phenomenon is the scene in the 2001 film *Legally blonde* where the character Elle Woods, played by Reese Witherspoon, turns up at a party of fellow Harvard students -where everybody is wearing ordinary clothes- dressed in a pink bunny costume, causing widespread hilarity. FL learners may feel similarly exposed when having to speak in the FL “but are unable to present themselves authentically when doing so” (Horwitz, 2017, p. 42).

Dewaele and MacIntyre (2014) offered the field a solid 21-item scale to measure FLE in a large sample of FL learners from all over the world ($N = 1746$). A Chinese translation and adaptation appeared in Li et al.(2018). Dewaele and MacIntyre (2016) later defined FLE as “a complex emotion, capturing interacting dimensions of the challenge and perceived ability that reflect the human drive for success in the face of difficult tasks (...) enjoyment occurs when people not only meet their needs, but exceed them to accomplish something new or even unexpected” (pp. 216-217). The origin of the construct is in Positive Psychology, and more specifically the book *Flow: The psychology of optimal experience* by Csikszentmihályi (1990) where the author argued that being in a state of flow, where there is a feeling of harmonious thoughts and actions, is extremely gratifying and emerges in activities where there is a fine balance between the challenge of an activity and a person’s skills.

In a qualitative multiple-case study on the fluctuations of FLE and FLCA of two Romanian EFL students, Dewaele and Pavelescu (2021) pointed out that while psychometrically solid scales may yield a reliable value, they only present a numerical reduction of a complex experience at the confluence of past and present, shaped by a wide range of learner-internal factors (personality) and contextual factors such as seating arrangements in the classroom or a dis/interest in the topic. They argued that FLE and FLCA are useful concepts at a super-ordinate level but that the individual experience of FLE and FLCA is unique to every individual in the moment.

Multilingualism was found to have a significant effect on both FLE and FLCA in Dewaele and MacIntyre (2014), explaining a small amount of variance. Post-hoc tests showed that participants with only two languages in their repertoire had significantly lower FLE scores and higher FLCA scores than more multilingual participants. A similar pattern was revealed for the trilinguals in comparison with quadrilinguals, pentalinguals and sextalinguals (pp. 249-250). A follow-up study by Botes et al. (2020) on a slightly scrubbed version of the same database ($N = 1622$) focused on the effects of multilingualism and self-perceived FL proficiency on FLE and FLCA using a two-way between-groups MANOVAs followed by two separate two-way ANOVAs, with FLA and FLE as separate independent variables¹. The two-way MANOVA revealed that multilingualism had a significant but small effect on both FLE and FLCA. This was confirmed in the ANOVAs: participants knowing more languages reported significantly more FLE and less FLCA. Post-hoc analyses revealed a nuanced picture for both emotions: the bilinguals reported significantly more FLCA than quadrilinguals and pentalinguals, but no significant difference existed between bilinguals and trilinguals, nor between the trilinguals and the quadrilingual. Similar patterns emerged for FLE: the pentalinguals reported significantly more FLE than bilinguals and trilinguals,

¹ Participants who had not provided data for one of the two independent variables were left out.

but no significant difference existed between bilinguals and trilinguals, nor between the trilinguals and the quadrilinguals.

Focussing on sources of variation in FLE and FLCA of 592 Kazakh secondary and university learners of Turkish, Dewaele, Özdemir et al. (2022) also found a significant positive correlation between the number of languages known by participants and FLE – a small effect. However, no relationship was found for FLCA. Participants included 87 bilinguals, 91 trilinguals, 305 quadrilinguals, 73 pentalinguals and 33 sextalinguals.

Similarly, the study by Dewaele et al. (2018) on 189 FL learners in two London secondary schools focused on learner-internal and learner-external sources of variation in FLE. One-way ANOVAs did not reveal any significant effect of multilingualism on FLE nor FLCA. Participants included 16 bilinguals, 41 trilinguals, 58 quadrilinguals, 42 pentalinguals and 32 sextalinguals.

Following a similar path, Dewaele and MacIntyre (2019) sought to identify learner-internal and learner-external sources of variation in FLE and FLCA among 750 FL learners from all over the world. Participants included 161 bilinguals, 268 trilinguals, 152 quadrilinguals, 99 pentalinguals, 40 sextalinguals and 30 participants with seven or more languages. A correlation revealed a significant negative relationship between the level of multilingualism and FLCA but no relationship existed with FLE. The level of multilingualism was one of the significant negative predictors of FLCA in a follow-up regression analysis.

Finally, Dewaele (2022) found no relationship between multilingualism and FLE nor FLCA in a sample of 207 Spanish EFL learners that included 60 bilinguals, 83 trilinguals, 53 quadrilinguals, 9 pentalinguals and 2 sextalinguals.

Older research that focused solely on FL Anxiety had shown that highly multilingual FL learners and users are typically less anxious in their different languages compared to less multilingual peers. Dewaele (2007) looked into FL Anxiety of 106 adult FL learners (35 bilinguals, 33 trilinguals and 38 quadrilinguals) in interactions with friends, strangers and in public speech. He found that the bilinguals were significantly more anxious in the three situations in their L2 than the trilinguals and quadrilinguals, who were not significantly different from each other. No effect of multilingualism emerged in the L3.

Pursuing the same avenue of research with a larger sample, Dewaele et al. (2008) investigated the psychological and sociobiographical sources of communicative anxiety among 464 multilinguals from all over the world (98 bilinguals, 118 trilinguals, 122 quadrilinguals, and 126 pentalinguals). Participants who knew more languages reported significantly lower levels of anxiety in interactions with friends, colleagues, and strangers, on the phone and in public speech in their various languages. The effect was strongest in the L3 and weaker in the L1, L2, and L4 participants. Investigating this further, Dewaele (2010) looked into the communicative anxiety of 953 first and foreign language users of French. They included 323 bilinguals, 376 trilinguals, 377 quadrilinguals and 503 pentalinguals. A series of correlation analyses revealed that the knowledge of more languages had no effect on communicative anxiety in French L1 but that it was linked to significantly lower anxiety in French L2, French L3 and French L4. The findings were interpreted in terms of affordances. The experience gained through multilingualism may have no perceptible difference on anxiety in the L1 but it creates affordances in FLs. In other words, it can serve as a crutch in later learnt languages and limit FLA.

Similar patterns emerged in Thompson and Lee (2013) who investigated the relationship between multilingualism and FLCA in a group of 123 EFL college students in Korea. The authors distinguished between intermediate and advanced proficiency learners, and between 85 low-level (Korean and English) and 36 high-level multilingual language learners (Korean, English and another FL). The latter reported lower levels of FLCA in English.

2.4. Personality and FL learner emotions

A number of studies have investigated whether personality traits may have an effect on multilingual FL learners' emotions. Dewaele et al. (2008) found that participants with high levels of Trait Emotional Intelligence (a lower-order personality trait) reported significantly lower levels of anxiety in all their languages. A similar pattern emerged in Resnik and Dewaele (2020, 2023) and in Li and Xu (2019). The previous studies and Li (2020) also reported that FL learners who score high on Trait Emotional Intelligence reported significantly higher levels of FLE.

Studies that focused on the relationship between higher-order personality factors and FL learner emotions revealed that Neuroticism is related to FLCA (see Asmali, 2017; Dewaele, 2013; Dewaele & Al-Saraj, 2015; Dewaele & MacIntyre, 2019; Vural, 2019), with small to large effect sizes. Dewaele and MacIntyre (2019) found that participants who scored high on the personality traits of Cultural Empathy, Social Initiative, Open-mindedness and Emotional Stability reported significantly higher levels of FLE. Following a similar research avenue, Botes et al. (2023) reported that FLE was significantly positively correlated with five higher-order personality traits, namely Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and negatively correlated with Neuroticism. FLCA was found to be negatively correlated with Conscientiousness, Extraversion, and positively correlated with Neuroticism. A follow-up multiple regression analysis revealed that the five global personality factors explained a quarter of variance in FLE and over a third of variance in FLCA. However, only Conscientiousness, Extraversion and Agreeableness were significant predictors of FLE and Neuroticism was the only statistically significant predictor of FLCA.

In sum, what this literature review has revealed is that there is a surprising amount of divergence in findings about multilingualism and its potential effects on cognitive performance, on further FL learning, on FL learners' personality and their classroom emotions. Reasons for this lack of consistency in the relationships could be linked to the definition and operationalization of "multilingualism" itself, to the wide range of dependent and independent variables coming from different disciplines, and to the complex and dynamic nature of learners' language systems, which may be influenced directly or indirectly by both learner-internal and learner-external variables. The sheer complexity of the problem means that no single study can solve the global puzzle. Instead, we aim to provide a partial answer to the question whether multilingualism is linked to FL learner emotions in three different groups of FL learners located in different countries and continents.

3. RESEARCH QUESTIONS

We formulated the following two research questions and hypotheses:

1. Is there a relationship between the number of languages FL learners know and their

level of FLE in class?

2. Is there a relationship between the number of languages FL learners know and their level of FLCA in class?

Hypothesis 1: FL learners who are more multilingual will experience more FLE in class.

Hypothesis 2: FL learners who are more multilingual will experience less FLCA in class.

4. METHODOLOGY

Quantitative research designs were used for the three studies. Data were collected using the same instruments (developed in Botes et al., 2021; Botes et al., 2023) from three different FL learner populations: Kuwaiti university learners, Moroccan secondary and university EFL learners, and young French secondary school pupils (Dewaele, Saito et al., 2022; Dewaele, Botes, et al., 2023; Dewaele, Guedat-Bittighofer, et al., 2023).

4.1. Study 1: FL Learning in Kuwait

Participants in Dewaele, Saito et al. (2022) were 360 FL learners in The Gulf University for Science and Technology in Kuwait which has English as the medium of instruction. Mean age was 20 years ($SD = 3.25$). A majority of participants were female ($n = 280$). Most studied English ($n = 252$) and smaller numbers of learners were enrolled in German ($n = 43$), Spanish ($n = 41$) and French ($n = 24$) FL classes. Arabic was the L1 of all participants, sometimes combined with other languages. The sample was highly multilingual with 176 bilinguals (including the one they were studying) and 129 trilinguals. Smaller numbers reported knowledge of four languages ($n = 35$), five languages ($n = 13$) and six or more languages ($n = 7$). In order to facilitate statistical analysis, the groups of participants knowing four or more languages were merged in a single group ($n = 55$). The questionnaire did not inquire about dialects, registers and varieties.

An online questionnaire in English was used to collect data four times over the course of one semester - as the focus of Dewaele, Saito et al. (2022) was on the development of learner emotions and motivation over time. For the purpose of the current study, the data relating to learner emotions were averaged out. Participants' sociobiographical backgrounds and language profiles were established during the first data collection. Botes et al.'s (2021) 9-item Short-Foreign Language Enjoyment Scale (S-FLES) with 5-point Likert scales was used four times to measure Foreign Language Enjoyment. It provided a total FLE score and scores for the three dimensions: Teacher Appreciation ("The teacher is encouraging"; "The teacher is friendly"; "The teacher is supportive"), FLE Personal ("In class, I feel proud of my accomplishments"; "I enjoy it"; "It's fun"), and FLE Social ("There is a good atmosphere"; "We form a tight group"; "We laugh a lot"). Analyses revealed alpha Cronbach values ranging from .81 to .93, suggesting strong internal consistency.

Participants also completed the 8-item Short Foreign Language Classroom Anxiety (S-FLCAS) with 5-point Likert scales previously used in Dewaele and MacIntyre (2014) and psychometrically validated in Botes et al. (2022b). Items referred to mild and more severe physical symptoms of anxiety ("I start to panic when I have to speak without preparation in

Foreign language class”; “I get nervous and confused when I am speaking in my FL class”). Two positively phrased items “I don't worry about making mistakes in FL class” and “I feel confident when I speak in Foreign language class” were reverse-coded. Cronbach alpha values ranged from .77 to .83 (Dewaele, Saito et al., 2022).

A one-sample Kolmogorov-Smirnov test revealed that the scores for FLCA were normally distributed ($D = 0.036$, $p = .20$). FLE scores were close enough to normal distribution ($D = 0.048$, $p = 0.042$). The QQ plot (quantile-quantile plot) showed that only the extreme tail of FLE deviated slightly (available from the authors on request). Parametric statistics were thus used, and more specifically independent t-tests and ANOVAs that allow moderate violations to normality (Field, 2013). Means and Standard Deviations are presented in Table 1.

4.2. Study 2: EFL learning in Morocco

The second study focused on classroom emotions of 502 Moroccan EFL learners (228 male and 269 female) enrolled in secondary schools, language centres and universities around Morocco (Dewaele, Botes, et al., 2023). The average age was 22.4 years ($SD = 7.1$). Proficiency in English ranged from beginners to advanced. Participants could choose an English or an Arabic version of the online questionnaire. The sampled included 62 bilinguals, 275 trilinguals, 138 quadrilinguals, 19 pentalinguals, 7 sextalinguals and one participant claimed knowledge of seven languages. For statistical reasons, we created a single merged category of participants knowing four or more languages ($n = 165$). All participants had Moroccan Arabic as an L1 and 146 participants also reported to have Amazigh as an additional L1. All students also knew Standard Arabic, which used in religious practice. A majority of participants had French as a FL ($n = 415$). After providing information on their sociobiographical background and language profile, participants filled out the S-FLES (Botes et al., 2021) and the S-FLCAS (Botes et al., 2022) (see Table 1).

4.3. Study 3: Early EFL learning in France

The third study focused on the classroom emotions of 181 French beginner EFL pupils (102 female, 71 male), spread over three schools in the same region in France (Dewaele, Guedat-Bittighoffer, et al. 2023). The average age of participants was 11.2 years ($SD = .40$). All participants had French as a first language (L1a); 28 pupils had a second first language (L1b), a variant of Arabic ($n = 23$) and possibly also Standard Arabic; and another four pupils had a third L1 (L1c). Pupils had four weekly one-hour EFL classes spread over 4 ½ days. Half of the pupils in the three schools had standard EFL instruction while the other half were taught English with a strong focus on intense authentic communication². Pupils filled out a paper questionnaire seven months into the academic year in which they provided information on their sociobiographical background and language profile. They also filled out a French translation of the S-FLES (Botes et al., 2021) and the S-FLCAS (Botes et al., 2022) (see table 1).

² As teaching method is not the focus of the present paper, the effect of multilingualism is calculated on the whole sample.

Table 1. Means and SDs for the dependent variables in the three studies

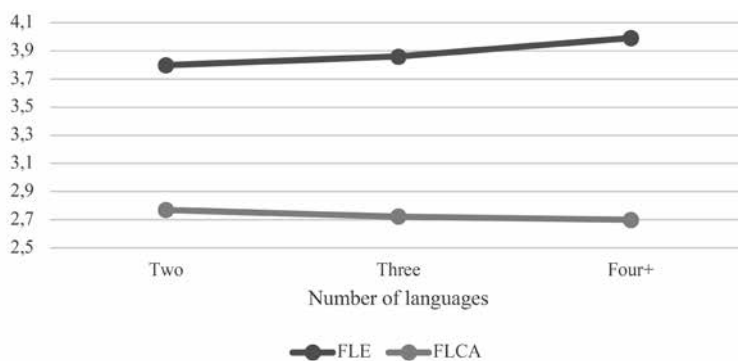
Variable	Study 1 (<i>N</i> = 360)	Study 2 (<i>N</i> = 502)	Study 3 (<i>N</i> = 181)
FLE	3.93 (<i>SD</i> = .34)	3.92 (<i>SD</i> = .85)	3.36 (<i>SD</i> = 1.01)
FLCA	2.74 (<i>SD</i> = .35)	2.55 (<i>SD</i> = .80)	2.67 (<i>SD</i> = .98)

5. RESULTS

5.1. Study 1: FL learning in Kuwait

A first one-way ANOVA with number of languages as independent variable and FLE as dependent variable revealed a significant effect ($F(2, 357) = 5.49, p < .005$, partial $\eta^2 = .03$ – a small effect size (Cohen, 1988)). A Scheffe post-hoc analysis showed that the difference between those knowing two and those knowing four or more languages was significant ($p < .005$). No other differences were significant. Knowing more languages was linked to higher levels of FLE (see Figure 1).

A second one-way ANOVA with a number of languages as the independent variable and FLCA as the dependent variable did not reveal any effect ($F(2, 357) = .96, p = .38$, partial $\eta^2 = .005$). A Scheffe post-hoc analysis showed no significant differences between the groups of Kuwaiti FL learners (see Figure 1).

**Figure 1.** Levels of FLE and FLCA of learners knowing two, three or four and more languages

5.2. Study 2: EFL learning in Morocco

A first one-way ANOVA with the number of languages as the independent variable and FLE as the dependent variable revealed a significant effect ($F(2, 499) = 6.46, p < .002$, partial $\eta^2 = .025$ – a small effect size (Cohen, 1988)). A Scheffe post-hoc analysis showed that the difference between those knowing two and those knowing four or more languages was significant ($p < .005$). The difference between the group with three and four and more languages was marginally significant ($p = .053$). Moroccan EFL learners knowing more languages reported higher levels of FLE (see Figure 2).

A one-way ANOVA with the number of languages as the independent variable and FLCA as the dependent variable showed a significant effect ($F(2, 499) = 5.42, p < .005$, partial $\eta^2 = .021$ - a small effect size (Cohen, 1988)). A Scheffe post-hoc analysis showed significant differences between the bilingual group and the group of learners with four or more languages ($p < .017$). The difference between trilinguals and those with four or more languages was also significant ($p < .031$) (see Figure 2).

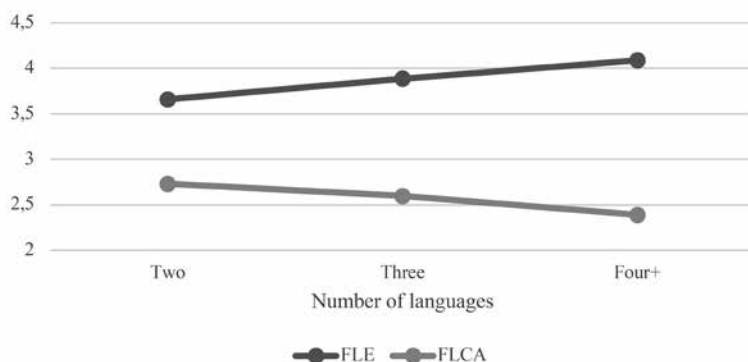


Figure 2. Levels of FLE and FLCA of learners knowing two, three or four and more languages

5.3. Study 3: EFL learning in France

Independent t-tests revealed that learners with two different home languages reported significantly higher levels of FLE than their peers in monolingual French families ($t(49.59) = -3.59, p < .001$, Cohen’s $d = .99$, which represent a large effect size (see Cohen, 1988)) (see Figure 3). A similar pattern emerged for FLCA, with the more multilingual group reporting significantly less anxiety in the EFL class ($t(179) = 2.24, p < .013$, Cohen’s $d = .97$, another large effect size) (see Figure 3).

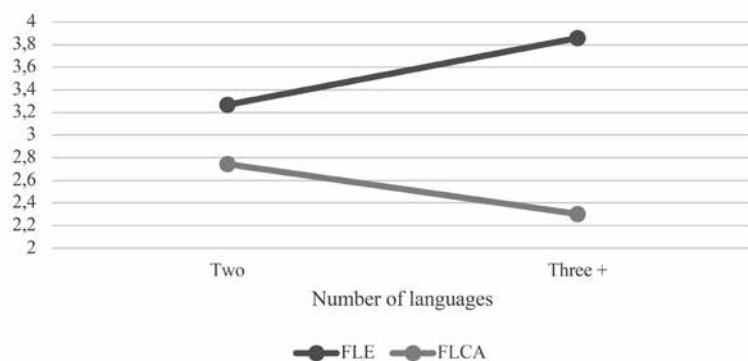


Figure 3. Levels of FLE and FLCA of learners knowing two or three and more languages

6. DISCUSSION

The hypothesis linked to the first research question that FL learners who knew more languages would enjoy their FL class significantly more was confirmed in all three studies and corresponds with the findings of most previous research on FL learner emotions (Botes et al., 2020; Dewaele, 2021; Dewaele et al. 2008, 2018; Dewaele & MacIntyre, 2014; Dewaele, Özdemir et al., 2022), with the exception of Dewaele and MacIntyre (2019) and Dewaele (2022). One possible explanation is that multilingual experience and the resulting meta-linguistic and meta-pragmatic knowledge provide highly multilingual learners with more sophisticated tools to detect similarities and differences in both linguistic systems. They thus possess the affordances to learn a FL more efficiently and to view the learning process more positively. Compared to their less multilingual peers, highly multilingual learners are more likely to become enthusiastic “language nerds”, excited and undaunted by the prospect of learning a completely new FL. Highly multilingual learners also have the advantage of starting the new FL learning journey equipped with a higher degree of open-mindedness, tolerance for ambiguity and empathy (Dewaele & Botes, 2020; Dewaele & Wei, 2012, 2013), which could contribute to a more engaging, enjoyable and positive FL learning experience (Dewaele & MacIntyre, 2019).

The answer to the second research question was more nuanced. The hypothesis that FL learners who are more multilingual experience less FLCA was confirmed in two out of the three studies. This pattern for FLCA reflects previous studies on the effects of multilingualism (Botes et al., 2020; Dewaele, 2007, 2010; Dewaele et al. 2008, 2018; Thompson & Lee, 2013), with the exception of Dewaele, Özdemir et al. (2022) and Dewaele (2022). Participants’ multilingualism may have strengthened their egos and helped them overcome their fear of coming across as inauthentic and stumbling (Horwitz, 2017). They may have realised that their pink dress did not define them and that it does not really matter if the colour of one’s dress does not match that of other people. As a result, their anxiety did not reach very high levels.

One particularly satisfying finding in the current paper is that the repertoire of the multilinguals in studies 2 and 3 included minority languages that had low prestige in the local context (Amazigh in Morocco and Arabic in France). In other words, the knowledge of minority languages that may be perceived as a problem for integration in mainstream society by some teachers (Gkaintartzi & Tsokalidou, 2011) turned out to be a strength as far as FL learners’ emotions were concerned. This confirms that any language in the multilinguals’ repertoire is valuable (cf. Berthele, 2021). The fact that the effects of multilingualism on learner emotions was most consistent in studies 2 and 3 could be linked to the fact that these multilingual participants had acquired two languages from birth while the multilingual participants in study 1 had typically become multilingual later in life through formal instruction. This distinction mattered enough for Filippi et al. (2020) to include it in their research design. It is probable that participants who had acquired two languages from birth had developed their meta-linguistic awareness from the start and had become natural sociolinguists in observing code-switching in their environment, including the reactions of interlocutors to different language choices. We cannot exclude the possibility that the early naturalistic learners in studies 2 and 3 had actually experienced a multilingual boost when

starting the acquisition of a new language (Cenoz, 2003). In this sense, the participants in studies 2 and 3 are quite different from the instructed FL learners in Berthele and Udry (2022).

The findings do not have direct classroom implications as teachers cannot single-handedly boost the level of multilingualism of their students. However, there are indirect implications to be drawn. Teachers can show that multilingualism is a linguistic, cultural and social asset by engaging students in reflection about how language functions and by drawing on the precious linguistic resources of everybody in the classroom. Sincere interest and respect by teachers who engage in authentic communication with learners using the target language make classes more enjoyable, more exciting and less anxiety-provoking (Dewaele, Guedat-Bittighofer, et al., 2023; Li et al., 2021).

The study is not without limitations. More detailed information on the proficiency of participants in their different languages and varieties would have allowed us to calculate to what extent the combination of multilingualism and global proficiency jointly predict FL learner emotions. Similarly, we are aware that statistical analyses are sufficient to establish relationships between variables but that they cannot shed light on causes. Further research could thus include a qualitative component in order to better understand the unique experience and the possible causes of FLE and FLCA among more and less multilingual FL learners.

7. CONCLUSION

We started the introduction with a reference to a fictional character, inspector Maigret, tasked with discovering the relationship between similar murders of two women in Paris within a few hours of each other. After establishing the link between the murders, Maigret sets out to identify and interrogate the culprit and discover the motive behind his gruesome acts. We joked that researchers engage in similar thinking but that they deal with abstract variables, comfortably seated behind their desk, rather than facing discoloured corpses and bloodthirsty murderers. The independent variable “multilingualism” was found to have a systematic significant positive effect on FLE and a -slightly less systematic- significant negative effect on FLCA in three very different groups of FL learners. Multilingualism being an abstract concept, it could not be interrogated. As a result, we could only speculate about the *modus operandi* of multilingualism on FL learner emotions.

To conclude, Positive Psychology has allowed applied linguists and FL teachers to turn away from a deficit perspective on FL performance and emotions, considering FL learners’ positive emotions as well as their negative ones, and viewing every language in the learners’ as valuable.

8. REFERENCES

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