The effect of individual factors on L3 teachers' beliefs about multilingual education
Otilia Marti Arnandiz, Laura Portolés Falomir

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The effect of individual factors on L3 teachers' beliefs about multilingual education

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ABSTRACT

Empirical research on L3 teachers' beliefs has gained momentum in the last decade since teacher cognition is paramount for understanding teaching practices in multilingual settings. Yet, the multilingual turn, advocated by scholars like [Cenoz, J. (2019). Translanguaging pedagogies and English as a lingua franca. Language Teaching, 52(1), 71-85; Cenoz, J., & Gorter, D. (2017). Translanguaging as a pedagogical tool in multilingual education. In J. Cenoz, D. Gorter & S. May (Eds.), Language awareness and multilingualism (3rd ed., pp. 309-321). Springer; or May, S. (Ed.) (2014). The multilingual turn: Implications for SLA, TESOL and bilingual education. Routledge; May, S. (2019). Negotiating the multilingual turn in SLA. The Modern Language Journal, 103(1), 122-129], has not been successfully incorporated into teacher training programmes around Europe. Recent works (g.g. [Kirsch, C., & Aleksić, G. (2018). The effect of professional development on multilingual education in early childhood in Luxembourg. Review of European Studies, 10(4), 148–163]), point to the positive impact of multilingual pedagogies on teachers' beliefs. However, while most studies are about experienced language practitioners [Arocena-Egaña, E., Cenoz, J., & Gorter, D. (2015). Teachers' beliefs in multilingual education in the Basque country and in Friesland. Journal of Immersion and Content-Based Language Education, 3(2), 169–193; Lundberg, A. (2019). Teachers' beliefs about multilingualism: Findings from Q method research. Current Issues in Language Planning, 20(3), 266–283; Haukås, Å. (2016). Teacher's beliefs about multilingualism and a multilingual pedagogical approach. International Journal of Multilingualism, 13(1), 1–18; Otwinowska, A. (2017). English teachers' language awareness: Away with the monolingual bias? Language Awareness, 26(4), 304–324; Mitits, L. (2018). Multilingual students in Greek school: Teachers' views and teaching practices. Journal of Education and e-Learning Research, 5(1), 28-36], less attention has been awarded to pre-service content teachers [Portolés, L., & Martí, O. (2020). Teachers' beliefs about multilingual pedagogies and the role of initial training. International Journal of Multilingualism, 17(2), 248– 264; Martí, O., & Portolés, L. (2019). Spokes in the wheels of CLIL for multilingualism or how monolingual ideologies limit teacher training. English Language Teaching, 12(2), 17–36; Schroedler, T., & Fischer, N. (2020). The role of beliefs in teacher professionalisation for multilingual classroom settings. European Journal of Applied Linguistics This leaves prospective non-language teachers'

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cognition as an underexplored area of study. In the light of this research gap, the present paper examines 121 teacher trainees' beliefs about multilingualism in Infant and Primary education. The focus is on the effect of external and internal factors on those beliefs. Results show no significant differences across groups, although a teacher's profile more inclined towards implementing multilingual policies might be drawn from our data. As a conclusion, we suggest that a reconfiguration of teacher training programmes is needed.

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1. Introduction

The change from monolingualism to multilingualism, also known as the 'multilingual turn', has slightly influenced the way languages are treated inside the classroom (May 2014, 2019). Currently, language teaching is important not only to acquire an international language like English but also to maintain community languages, either minority or migrant ones. As a result, the rise of multilingual programmes, in which languages other than English are promoted, is a widespread tendency in schools based in Europe and beyond.

In this multilingual environment, examining teacher cognition is key for developing appropriate multilingual practices inside the classroom as well as for the design of teacher training programmes that adopt a multilingual perspective. Accordingly, an increasing number of European studies on teachers' beliefs about teaching a third language (L3) have been published in the last decade. Yet, little research thus far has been undertaken into the beliefs of pre-service teachers about multilingualism in Infant and Primary settings (for an overview, see Calafato, 2019). At this point, more investigation is needed to tease out the interplay between a more complex and dynamic view of teacher cognition and the external and internal factors shaping it. The present study, a follow-up of a previous work exploring the impact of instruction on prospective teachers' beliefs about multilingual education in the Valencian Community (Portolés & Martí, 2020), is an effort in this direction.

2. Theoretical framework

2.1. The multilingual turn in teacher training programmes

The last decades have seen a paradigm change in research from monolingualism to multilingualism. This theoretical shift, known as the multilingual turn, has emerged as a reaction against the field of second language acquisition, which has traditionally ignored the language repertoire of individuals (Cenoz, 2019; May 2014). Contrary to SLA, third language acquisition does acknowledge the fluid use of multiple languages from one's linguistic repertoire and abandons the idea that languages should be kept separate inside and outside the classroom. To date, an extensive body of research has been conducted in the field of multiple language acquisition, confirming the advantages of multilingual speakers (Bartolotti & Marian, 2017; Bialystok, 2011; Safont, 2005) and the benefits of using multilingual approaches, like pedagogical translanguaging, in instructional settings (Cenoz & Gorter, 2017; Cenoz & Santos, 2020; García, 2017).

Leading scholars like Cenoz (2019), Cenoz and Gorter (2017), or May (2014, 2019) have claimed that such multilingual turn has not been fully incorporated into initial teacher training programmes around Europe. This training gap on multilingual pedagogies would explain why most teacher classroom practices are still monolingual-biased (De Angelis, 2011) and dominated by an English-only policy (Otwinowska, 2017), while the use of other languages - the learner's L1(s) - has been forbidden, allegedly, to prevent any type of interference with the acquisition of the target language.

Considering this scenario, a call for training teachers in current multilingual and holistic views of language learning has been made (Cenoz, 2019; Liyanage & Tao, 2020; Otwinowska, 2017). As Schroedler and Fischer (2020, p. 4) put it, 'a need to better prepare future teachers for multilingual classroom realities has been perceived for some quite time', More effective language pedagogies, then, demand teachers who are knowledgeable about multilingual research. On that account, the study of teachers' beliefs is relevant to know their actual thoughts about these issues. Identifying the way teachers perceive languages and understand multilingual education is key to design excellent teacher training programmes and develop better language practices in the classroom. To de Mejía and Hélot (2015, p. 274), teachers are among the agents who create the relationships between language and power in the classroom and in the curriculum, Hence, practitioners may be capable of shaping students' linguistic practices and changing the status and value attached to languages in the school context.

To further define the research gap we aim to fill, the next section will revise prior literature. Our objective is to take a closer look at existing studies on teachers' beliefs about multilingual education. Particular attention will be placed on those dealing with the effect of external and internal factors on teacher cognition.

2.2. Predictors of teachers' beliefs

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Many definitions have been given over the years for the concept 'teachers' beliefs', With Haukås (2018, p. 356), we would say that it refers to 'a complex network of experiences and interpretations that teachers have from their own schooldays, studies and practice, and from society in general, This research area, which is included in the cognitive dimen-Q8 sion of the attitudinal construct (Garrett, 2010), examines what teachers 'think, believe and do', to use Borg's (2003) terms. Lately, the study of beliefs in multilingualism has gained importance since the number of works investigating them has significantly increased (Calafato, 2019).

Most contributions in this field have looked into in-service teachers' cognition. Much of the earlier research has focused on experienced practitioners working at different levels such as Infant (Kirsch et al., 2020; Kirsch & Aleksíc, 2018), Primary (Alisaari et al., 2019; Q9 Arocena, 2017; Arocena et al., 2015; Gorter & Arocena, 2020; Knudsen et al., 2020; Lundberg, 2019), Secondary (Calafato, 2020; Griva & Chostelidou, 2012; Haukås, 2016; Mitits, 2018; Otwinowska, 2017; Villabona & Cenoz, 2021), or Tertiary education (Doiz & Lasagabaster, 2017).

When asked about their stance on multilingual education, participants in the aforementioned studies concur with the idea that multilingualism is advantageous. However, other findings from these same studies also suggest that, when facing the reality of the classroom, their teaching practices are greatly conditioned by a strong

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monolingual viewpoint. Moreover, many teachers' reluctance to use languages different from the target one has been observed, since the resort to other languages is still seen as detrimental for achieving the established language goals. Even though their beliefs about multiple language use are not positive, some teachers concede that they actually employ their L1(s) for practical reasons linked to classroom management. Therefore, the general pattern found across countries and educational levels in this line of enquiry, as summarised by Basturkmen (2012), presents some incongruence between teachers' beliefs and their actual teaching practices.

Moving to pre-service teachers, similar findings have been made (Fischer & Lahmann, 2020; Martí & Portolés, 2019; Portolés & Martí, 2020; Schroedler & Fischer, 2020). In the Valencian region, the study conducted by Martí and Portolés (2019) explored 110 prospective teachers' beliefs about Content and Language Integrated Learning (CLIL) in multilingual settings. Participants' opposing views on the use of multiple languages in the CLIL classroom were noted. On the contrary, Portolés and Martí's (2020) further research on 120 pre-service Infant and Primary teachers' cognition about multilingual education reported that this group of teacher trainees held rather positive views towards the use of several languages in the classroom and were in favour of the promotion of minority languages like Catalan. Nevertheless, they were against the use of migrant languages, such as Romanian and Arabic. In turn, Schroedler and Fischer's (2020) study concluded that 296 prospective teachers in Germany were in favour of multilingualism, although they did not seem to be equipped with the necessary skills and knowledge about how to handle a classroom with multilingual learners. In their words (Schroedler & Fischer, 2020, p. 17), 'pre-service teachers want to be well-prepared for multilingual classroom realities, but their preparation in the teacher degree might be insufficient',

Besides pointing out the contradictions between ideals and reality, recent research has challenged the traditional approach to beliefs as static constructs. In so doing, the features that may bear an influence on teacher cognition have been brought into the foreground (Borg, 2018). Studies on both pre-service and in-service teachers were set to identify which background characteristics may contribute to predict their beliefs on multilingual teaching and learning. Those shaping factors are categorised as external and internal. While the former refer to environmental and curricular issues affecting the whole community, the latter embrace those variables with an impact on individuals. As to L3 teachers' beliefs, the external factors most carefully analysed have been the effect of a training course (Fischer & Lahmann, 2020; Gorter & Arocena, 2020; Kirsch et al., 2020; Kirsch & Aleksíc, 2018; Portolés & Martí, 2020; Schroedler & Fischer, 2020), participants' teaching experience and background (Knudsen et al., 2020; Mitits, 2018), and out-of-school contact (He, Lundgren & Pynes, 2017). Research on the influence of internal Q10 factors has concerned variables such as gender (Fischer & Ehmke, 2019; Schroedler &

 Fischer 2020), teachers' language repertoire (Ellis, 2013; Haim, Orland-Barak & Goldberg, 2020; Otwinowska, 2017; Schroedler & Fischer, 2020) or teachers' proficiency level (Knudsen et al., 2020).

Starting with external factors, the role of instruction on shaping teachers' acceptance of multilingualism has been addressed. Several scholars (Gorter & Arocena, 2020; Kirsch et al., 2020; Kirsch & Aleksíc, 2018), have measured the impact of professional training courses on in-service teachers' beliefs. Their findings generally support the positive influence of those instructional periods centred on multilingual pedagogies, after which many participants better understood the value of the L1(s) and began to implement translanguaging practices in class. The same benefits are confirmed for a research population of pre-service teachers in Germany (Fischer & Lahmann, 2020; Schroedler & Fischer, 2020) or in Spain (Portolés & Martí, 2020). Taken together, these three last contributions showed how initial teacher training modules on multilingual education also resulted in more positive views towards multilingualism, even after just onesemester course on the topic (Fischer & Lahmann, 2020).

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Teaching experience and training background have been considered by authors like Alisaari et al. (2019), Calafato (2020), Mitits (2018) or Knudsen et al. (2020). In the Greek context, Mitits (2018) found that teachers who were language specialists were more in favour of multilingualism than content teachers. Similarly, the number of working years would be a predicting factor in shaping beliefs, being the novice teachers more open to multilingual approaches than the experienced ones. In contrast, teaching experience had no impact in the study conducted by Knudsen et al. (2020), who examined 61 teachers' beliefs on multilingualism in the Danish context. One possible explanation for this exception might be the fact that, there, most of the practitioners were equally trained to deal with linguistically diverse classrooms. Likewise, in the study by Alisaari et al. (2019) carried out in Finland, the subjects' overall teaching experience remained irrelevant, whereas experience in teaching migrants emerged as a predicting factor. In countries such as Norway and Russia, those teachers specialised in two or more foreign languages saw greater benefits in multilingual approaches than those who only taught one foreign language (Calafato, 2020). Thus, it can be argued that teacher training background may be a salient factor on determining teachers' beliefs, being those practitioners formed in languages and multilingual approaches more positive towards multilingual education than their content colleagues with no pedagogical training.

To the best of our knowledge, He et al. (2017) is the only publication about the impact of a short-term stay abroad period. Two conclusions can be drawn from this study. First, that a stay-abroad experience was not sufficient for enhancing in-service teachers' intercultural awareness and positive beliefs about multilingualism. And, second, that some guided reflection before and after the intercultural experience is a must if favourable attitudes towards multilingual approaches are to be achieved.

Turning to internal variables, Schroedler and Fischer (2020) have tackled the role of gender on teachers' beliefs about multilingual education. From their analysis, we learn that female participants appeared to be more prone to adopt multilingualism than male respondents. Another example comes from Fischer and Ehmke (2019), who confirmed that female teachers were more likely to hold welcoming views about multilingualism than their male counterparts.

Teachers' language repertoire has caught the attention of researchers like Ellis (2013), Haim, Orland-Barak and Goldberg (2020), Otwinowska (2017), or Schroedler and Fischer (2020). Otwinowska (2017), for instance, found that Polish teachers with a richer multilinqual background expressed more positive views about multilingual education. Likewise, research conducted by Haim, Orland-Barak and Goldberg (2020) or Ellis (2013) highlighted the importance of EFL teachers' language and cultural background in implementing a multilingual approach. Schroedler and Fischer's (2020) study also lent support to the superiority of those participants with a richer multilingual profile. It seems, then, that Ellis (2013, p. 447) was right when asserting that 'teachers' language histories are both

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complex and dynamic and contribute to their professional knowledge and beliefs in important ways' Last but not least, the impact of proficiency level has been also investigated. Knudsen et al.'s (2020) study indicated that those participants with a higher level of English proficiency were better disposed towards the multilingual turn.

On the basis of the extant literature on teachers' beliefs and multilingualism reviewed above, several ideas to move research forward can be inferred. First, novice teachers constitute a section of the targeted population which has received less attention than experienced practitioners. Second, although investigation into the effect of internal and external factors does not abound, evidence obtained in different geographical areas has enlisted a number of individual factors with the potential of acting as predictors of teachers' beliefs. Third, missing from this small but growing collection of studies is some focused research into the impact of such individual variables. Given the paucity of findings on the effect of a variety of external and internal factors, the present follow-up study of an earlier work (Portolés & Martí, 2020) aims to address this gap of knowledge by providing more insights into pre-service teachers' beliefs. With this in mind, our guiding research question will be:

What is the influence of internal (ie. gender, L1 and proficiency level) and external (ie. teacher background training, language programme, extra-tuition in the L3, out-of-school contact and stay abroad period) factors on pre-service teachers' beliefs?

3. Method

3.1. Participants

The study involved 121 teacher trainees from a state-run university at the Valencian Community, a bilingual region where both Spanish and Catalan are official languages. As seen in Table 1, 53.7% of our subjects (n = 65) were enrolled in the degree of Infant Education, while the remaining 46.3% (n = 56) were studying to become Primary teachers. It is worth noticing that none of them were future language specialists, but generalist content teachers-to-be.

Table 1. Detailed information about participants.

	Factors	Categories	Number of participants
Internal Factors	Gender	Male	11
		Female	110
	Language Background	Spanish	53
		Catalan	65
		Romanian	3
	Proficiency Level	A1	7
Anguage Background Proficiency Level External Factors Degree Language Programme Extra-Tuition Stay Abroad	•	A2	74
		B1	37
		B2	3
External Factors	Degree	Infant	56
	3	Primary	65
External Factors C L E	Language Programme	Spanish-based	52
	3 3 3	Catalan-based	69
	Extra-Tuition	Yes	104
		No	17
	Stay Abroad	Yes	19
	•	No	102
	Out of School Contact (OV films, Music)	Yes	50
		No	71

Female subjects (n = 110, 91%) clearly outperformed male ones (n = 11, 9%) in an unbalanced distribution that, nonetheless, is representative of the gender-related asymmetry found in the teaching profession. As many as 65 respondents (53.7% of the sample) had Catalan as their L1, followed by Spanish (n = 53, 43.8%) and Romanian (n = 3, 2.5%). Regarding the language programme, 57% of the participants (n = 69) were instructed through the medium of Catalan during their school years, whereas 43.8% of them (n =52) had attended Spanish-based schools.

With reference to their language competence, the vast majority of our research population were, at least, trilingual since Catalan, Spanish and English are taught in the Valencian educational system. All in all, their competence in the minority language does vary depending on their actual language use and school language programme. In order to establish participants' English proficiency, a Quick Placement Test was implemented. According to the Common European Framework of Reference for Languages, results showed that many respondents had a limited language competence in English with 81 elementary users (67%) and 40 intermediate ones (33%).

Despite their poor level of English, 86% of the sample (n = 104) declared to have received private tuition in commercial language schools while 41% of participants (n = 50) were exposed to extramural English, through daily activities like watching films in original version, playing video games or listening to music. Very few respondents (n = 17; 16%) had enjoyed a short-term study abroad period in an English-speaking country.

Considering all those demographic factors, Table 1 offers a summary of our respondents' background information, classified into internal and external factors, as follows.

3.2. Instrument

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The data collection tool was a written questionnaire, partially inspired by Griva and Chostelidou's (2012) semi-structured interviews. This instrument was already implemented in other work (Portolés & Martí, 2020) and comprised two main sections. The first gathered information about our participants' background. More specifically, biographical (e.g. gender, L1 and type of bilingualism) and academic details (e.g. school language programme, out-of-school contact, English proficiency level, etc.) were collected. The second section contained 30 items on a five-point Likert-type scale, which were classified into six main themes about multilingual education:

- (1) The first set included five items revolving around the status of European languages, with statements such as: 'Minority European languages like Catalan, Basque or Irish need further promotion in the classroom'.
- (2) The second set of four items dealt with languages of schooling in Europe. One example from this thematic strand reads: 'Migrant children's L1s such as Romanian or Arabic have to be taught in Valencian schools'
- (3) The third set also presented four items with a focus on the benefits of multilingualism and the notion of multicompetence, as in: 'Active use of more than one language facilitates foreign language acquisition'
- (4) The fourth set consisted of five items about early language learning and the best age for introducing compulsory English. Among these items, the following can be found:

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How languages are learnt in school is more important than when they are introduced'

- (5) Forms of immersion in English are the topic of the fifth set with six items like: 'English is better taught in full immersion programmes offered by international schools'
- (6) The last set of items embraced six statements regarding the multilingual teacher's profile, from which the next item is quite representative: The best English language teachers are native speakers of this language'

3.3. Procedure

The present study focuses on the analysis of quantitative data drawn from a Likert-scale questionnaire detailed in the prior section. Respondents were required to complete the questionnaire in a regular university classroom and the maximum allowed time was half an hour. Ethical standards in data collection were followed as all students volunteered to participate and gave their informed consent. In order to preserve the anonymity of individuals, their responses were assigned a code number. Complete honesty in answering the survey was kindly requested. Participants had to indicate their agreement or disagreement with each of the 30 statements in the questionnaire. The scores obtained were usually codified as follows: the option Strongly Agree (SA) was recorded as 100; the option Agree (A), as 75; Neither Agree nor Disagree (NAND), as 50; Disagree (D), as 25; and, Strongly Disagree (SD), as 0. Yet, as in other questionnaires using a Likert scale, some statements had to be reversely scored. A case in point is the example taken from the last thematic strand (i.e. The best English language teachers are native speakers of this language'), where the numerical scoring system runs in the opposite direction. That is, an answer of SD in this item was coded as 100, D, as 75; NAND, as 50; A, as 25; and SA, as 0. In both direct and reverse-scored items, then, values closer to 100 would indicate a more positive attitude towards multilingualism. Once the coding was completed, results were processed by means of the SPSS programme. As data were not normally distributed, non-parametric statistics was used with Mann-Whitney and Kruskal, Wallis tests. Significance was considered at the level of 0.05.

4. Results

This follow-up study set out to determine the influence, if any, of both internal and external individual factors on teachers' beliefs about multilingualism. On the one hand, we explored three internal variables, namely, (1) participants' gender, (2) their language background and (3) their English proficiency level. On the other hand, the external variables tested were: (1) subjects' pedagogical training (Infant or Primary education degree), (2) school language programme (Catalan-based or Spanish-based), (3) extra-tuition, (4) out-of-school contact; and, finally, (5) short-term stay abroad. To start the analysis, Table 2 lists the mean ranks of each internal factor.

On the whole, teacher students' beliefs about multilingual education were not very favourable insomuch as values over 70 were the exception. More specifically, results showed that male respondents and those participants with a B2 level of proficiency in English held the most welcoming views. In contrast, females, Spanish-speaking students

Table 2. Mann-Whitney and Kruskal-Wallis test results of prospective teachers' beliefs in each internal factor.

Internal factors		Mean Ranks	Mann Whitney U/ Kruskal Wallis H	P value
Gender	Male	77.59	2.708	0.100
	Female	59.34		
L1 Spanish Catalan	54.91	2.862	0.239	
	Catalan	65.86		
	Romanian	63.33		
Proficiency level	A1	65.29	1.088	0.780
,	A2	58.68		
	B1	63.74		
	B2	74.33		4

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and participants with an A2 level of English proficiency were the most disinclined to accept multilingualism. Actually, their mean ranks were between 50 and 60. In order to know whether there were statistically significant changes according to the categories present within each internal factor, we applied a Mann_xWhitney test for gender, a variable with only two groups and a Kruskal_xWallis test for L1 and proficiency level as there were more than two groups to be examined.

The Mann Whitney test for gender revealed that male and female subjects did not differ significantly in terms of their beliefs on multilingualism (U = 2.708, p = 0.100). Yet, a mean rank of 77.59 for males would indicate that their acceptance of multilingual education was stronger than the one found in their female counterparts (mean rank = 59.34). In connection with the L1, participants whose home language was Catalan displayed the most positive views towards multilingualism (mean rank = 65.86), followed by Romanian speakers (mean rank = 63.33) and by Spanish-speakers (mean rank = 54.91). All in all, the results derived from the Kruskal Wallis test reported no significant differences among the L1s (H = 2.862, p = 0.239). With reference to proficiency level, no significant differences were noted across groups (H = 1.088, p = 0.780), but those intermediate users of English expressed more positive attitudes towards the multilingual turn than beginners did.

Apart from comparing groups, internal factors were further analysed in order to discover whether there exist differences in the various thematic strands of the questionnaire. To that end, the mean ranks in each thematic dimension were calculated and displayed in Table 3.

According to the p-values in Table 3, there were no statistically significant differences in any of the thematic strands with respect to internal factors. Concerning gender, female respondents were the ones holding more monolingual views in the majority of thematic dimensions, a fact worth mentioning in a country like Spain where teaching is still a feminised profession. Moving to the L1, Romanian speakers' responses warrant further attention since the values attached to them represent the highest means ranks as well as the lowest ones. This is so because those participants with Romanian as their L1 are clearly in favour of multilingualism in the following matters: status of languages (mean rank = 88.33), forms of immersion (mean rank = 73.83) and the teacher's profile (mean rank = 73.83). Nevertheless, in comparison with the other two groups, their notions of multicompetence (mean rank = 35.67) and the earlier the better assumption (mean rank = 22.50) were more conservative. As to proficiency in the L3, those with a B2 level demonstrated an impressive degree of agreement with multilingual principles (mean rank = 97.37),

Table 3. Mean ranks of prospective teachers' beliefs in each thematic dimension with respect to internal factors.

Internal Factors		1. Status of languages		2. Multilingual Education		3. Multicompetence		4. Best age to start English		5. Forms of immersion		6. Teacher's profile	
Gender	Male	75.41	0.150	58.18	0.780	78.23	0.080	71.55	0.290	64.68	0.710	61.09	0.993
	Female	59.56		61.28		59.28		59.65		60.63		60.99	
L1	Spanish	54.25	0.091	61.58	0.981	60.63	0.419	61.48	0.152	53.84	0.128	58.15	0.640
	Catalan	65.25		60.65		62.47		62.47		66.25		62.76	
	Romanian	88.33		58.33		35.67		22.50		73.83		73.83	
Proficiency level	A1	65.93	0.876	85.00	0.161	72.21	0.614	43.36	0.400	47.21	0.756	59.50	0.097
,	A2	60.11		56.52		62.57		62.54		61.46		57.37	
	B1	62.86		65.30		56.65		59.66		62.54		65.04	
	B2	48.33		62.50		49.67		80.67		62.83		97.37	

followed by participants with a B1 (mean rank = 65.04). Rather, the lowest scores were got by beginners (A2, mean rank = 57.37 and A1, mean rank = 59.50).

Generally speaking, the impact of external factors on teacher students' beliefs about multilingual education was far more moderate. In fact, only those teachers-to-be who had been abroad in an English-speaking country, however briefly, scored more than 70. The remaining mean ranks were between 50 and 70. The lowest one (i.e. 53.84) was reported by those participants enrolled in a Spanish-based programme during their school years. In order to know whether statistically significant changes between the categories in each variable exist, a Mann-Whitney test was performed.

As summarised in Table 4, no statistically significant differences appeared in relation to the external factors considered with all p-values exceeding the level of 0.05. All in all, Table 4 also shows how those students enrolled in the Infant education degree (mean rank = 66.32) believed more in multilingual education than future Primary school teachers (mean rank = 54.82). In the case of the language programme factor, there was also some distance between those schooled in Spanish-based programmes (mean rank = 53.84) and those who had studied in Catalan-based schools (mean rank = 66.40) and were more aligned with multilingual views. As regards the extra-tuition variable, prospective teachers who attended lessons outside the regular English classroom (mean rank = 59.89) were less favourable to multilingual education than those who did not receive extra-tuition in English (mean rank = 69.62). Within the out of school contact category, those teacher trainees with a higher exposure to the L3 (mean rank = 66.26) were more favourable to multilingualism than those with less time spent on extramural English (mean rank = 57.30). Concerning the last external factor, participants who had enjoyed a short-term abroad period (mean rank = 71.68) displayed greater sensitivity towards multilingualism than those who did not have the chance of living in an English-speaking country (mean rank = 59.01).

Also of interest is the way that each external factor may behave in consonance with the six thematic strands of the questionnaire. Table 5 presents mean ranks resulting from the implementation of a Mann-Whitney test.

Contrary to Table 4, in which differences between groupings were not statistically significant in any of the five external factors examined, the detailed analysis of such variables per each single thematic strand offers some outcomes worth commenting. With reference to the teacher training background, Infant degree students' beliefs in multilingual education (i.e. strand 2) were more positive than those of Primary undergraduates with a mean rank score of 74.58 versus one of 45.25 and a p-value of 0.000.

Table 4. Mann-Whitney test results of prospective teachers' beliefs in each external factor.

External factors		Mean Ranks	Kruskal Wallis H	P value
Teacher Training Background	Infant	66.32	3.235	0.072
	Primary	54.82		
Language programme	Spanish-based	53.84	3.804	0.051
	Catalan-based	66.40		
Extra-tuition	Yes	59.89	1.194	0.275
	No	69.62		
Out of school contact (OV films, music)	Yes	66.26	1.917	0.166
	No	57.30		
Stay abroad	Yes	71.68	2.092	0.148
	No	59.01		

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Table 5. Mean ranks of prospective teachers' beliefs in each thematic dimension with respect to external factors.

External factors		1. Status of 2. Multilingual languages Education		3. Multicompetence		4. Best age to start English		5. Forms of immersion		6. Teacher's profile			
Teacher Training Background	Infant	61.03	0.992	74.58	0.000	61.88	0.767	56.15	0.099	59.64	0.643	66.10	0.082
	Primary	60.96		45.25		59.97		66.63		62.58		55.08	
Language programme	Spanish-based	53.02	0.029	62.05	0.773	63.25	0.534	54.23	0.064	54.52	0.076	60.50	0.891
	Catalan-based	67.01		60.21		59.30		66.10		65.88		61.38	
Extra-tuition	Yes	59.04	0.127	63.00	0.117	60.72	0.823	58.00	0.019	59.86	0.372	61.56	0.662
	No	73.00		48.76		62.74		79.35		68.00		57.59	
Out of school contact (OV films, music)	Yes	64.31	0.382	67.47	0.085	58.08	0.435	60.17	0.826	66.51	0.144	67.32	0.093
	No	58.67		56.44		63.06		61.58		57.12		56.55	
Stay abroad	Yes	58.79	0.764	67.11	0.404	68.11	0.329	58.26	0.709	66.03	0.494	72.84	0.105
	No	61.41		59.86		59.68		61.51		60.06		58.79	

The second external factor with a clearer impact on teacher cognition about multilingualism was the school language programme. The difference between those subjects schooled in Catalan-based programmes with a mean rank score of 67.01 and those attending Spanish-based ones with a mean rank of 53.02 — turned out to be significant (U = 4.757, p = 0.029) in the first thematic strand. Similar results were observed in dimensions 4 and 5, also in favour of those schooled in Catalan-based programmes, who scored higher mean ranks (66.10 and 65.58) than those enrolled in Spanish-based schools (54.23 and 54.52). Here, the gap was not significant either in the fourth (U = 3.440, p = 0.064) or in the fifth thematic cluster (U = 3.153, p = 0.076).

Moving to the extra-tuition variable, it is interesting to note that, in strands 1, 4 and 5, students with no access to private English lessons reached higher mean ranks (with figures of 73.00, 79.35 and 68.00), in detriment of those enjoying more English instruction – with lower mean ranks of 59.04, 58.00 and 59.86, respectively. Yet, such differences were only significant in thematic dimension 4 (U = 5.485, p = 0.019). Smaller changes were also seen in the two groups resulting from the presence/absence of out-of-school contact, since both showed comparable levels of agreement in most thematic strands, with a slight advantage for subjects more exposed to extramural English. Similarly, no significant differences appeared between participants who enjoyed a study abroad experience and those who stayed at their home country, with the highest mean values being displayed by respondents who had studied abroad.

Having reported all the data found after performing the statistical analysis, the next section will discuss the obtained results considering prior literature on the topic.

5. Discussion

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The current study seeks to go deeper into the potential impact of internal and external factors on prospective teachers' cognition about multilingual education. In broad terms, our findings indicate that student teachers' beliefs towards multilingualism range from neutral towards positive. Furthermore, many subjects displayed an acceptable level of agreement towards most of the statements in the survey they completed. Yet, with a score of 100 as the highest value implying full knowledge of multilingual matters, mean scores over 70 were quite the exception. For the so-called multilingual turn in education (Cenoz, 2019; May, 2019) to come true, higher values would be desirable as well-prepared practitioners are essential to develop appropriate multilingual policies in schools as a whole.

Responding to our research question, we may confirm that the external and internal factors considered here did not influence novice teachers' beliefs about multilingual education. Mann Whitney and Kruskal Wallis test results revealed that no significant differences were found in any internal or external variable. That is, individual factors did not become significant predictors of participants' stance on multilingualism. One possible explanation for this outcome would be the homogeneity of the research sample. After all, our subjects were trained as would-be teachers at the same state-run university and, hence, do belong to an analogous academic and cultural milieu. However, on a more positive note, a tentative teachers' profile holding more welcoming views towards multilingual education has emerged and could be characterised as follows.

Different from Fischer and Ehmke's (2019) and Schroedler and Fischer's (2020) works, where females outperformed males in their positive attitudes towards multilingualism,

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our data suggest that male student teachers are more willing to engage in multilingual education than their female counterparts. It may have been the case, though, that the unequal distribution of male (9%) versus female respondents (91%) in our sample is behind this opposing trend. In any event, this departure from previous literature is remarkable and deserves further research.

Moving to the effect of the L1(s), it is worth emphasising that, when compared to Spanish-speakers, participants with a minority (i.e. Catalan) and a migrant language (i.e. Romanian) as their L1 are more aware of the benefits of multilingualism. They also have a better understanding of European multilingual policies. In that respect, our study may support previous findings from Schroedler and Fischer (2020) or Otwinowska (2017). According to these authors, practitioners with a richer multilingual background conveyed more positive views on multilingual education and had more knowledge on how to engage linguistically diverse classrooms than those teachers whose L1 was the majority and dominant language of the country.

Results linked to teachers' proficiency level in the L3 seem also to be aligned with previous studies (e.g. Knudsen et al., 2020) where this internal variable is associated with a more developed awareness about what being a competent multilingual teacher means. In our data, those pre-service teachers with a higher proficiency in the L3 hold the most positive views towards multilingual approaches and depict their ideal multilingual teacher in a very precise way. As a caveat, it should be noted that the superiority of English is taken for granted in this higher proficient group.

Unlike those students enrolled in the Primary education degree, undergraduates trained to become Infant teachers are more supportive of modalities of multilingual education in which children's community languages, either minority or migrant ones, are promoted. Differences in favour of future Infant practitioners were statistically significant in the second thematic, with a p-value of 0.000. This may be consistent with novice Infant teachers' need to accommodate all their very young learners' L1s. By a way of contrast, the group of prospective Primary school teachers - see strands 4 and 5 in Table 5 - is the one embracing more forms of immersion in English. In line with Muñoz (2019) or Pfenninger and Singleton (2017), they also acknowledge that the earlier English is introduced the better is not the panacea but a false myth that has spread out. As no studies to date have dealt with the effect of teacher training background on teacher cognition, our study may shed light on the specific challenges that future reconfigurations of initial teacher training should tackle. A lesson to be drawn, then, is that monolingual views affect both Infant teachers-to-be (e.g. with the unwarranted assumption that with English, the earlier, the better) and their Primary education colleagues (e.g. more anxious to avoid migrant languages).

The impact of the language school programme turned out to be significant in the first thematic strand concerning the status of languages. In fact, those participants whose beliefs are more welcoming towards multilingualism coincide with student teachers who used to attend schools where the minority language was the medium of instruction. Therefore, contrary to subjects schooled in Spanish-based centres, those coming from Catalan-based schools are more in favour of the promotion of minority languages and openly question the supremacy of English. This finding might be counted among the insights afforded by the present study because it is indicative of which language school programme may offer a more complete and clearer picture of what and how multilingual education should be.

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Surprisingly enough, in dealing with the extra-tuition variable, we discovered that students who attended English language lessons outside their regular school timetable are more likely to challenge the presence of minority and/or migrant languages. They also prefer stronger forms of English immersion and opt for a very early introduction of this international language. Actually, the difference between both groups regarding the earlier the better assumption (see strand 4 in Table 5) was found to be significant. Thus, participants more exposed to formal English express more monolingual opinions than the rest. This unexpected pattern may be due to the fact that practices present in private language schools are usually framed from monolingual principles and mostly restricted to an only-English language policy. In contrast, informal exposure to English via films, songs or video games appears to enhance teacher students' positive views towards multilingual education. In essence, this is a rather paradoxical finding worth exploring that should alert researchers about the distinct effect of various types of extramural English activities.

The unproven impact of a short-term study abroad period on teachers' beliefs about multilingualism appears to tally with He et al.'s (2017) work. Yet, our analysis point out that those future teachers who had enjoyed some international experience might be more prepared to engage with learners from culturally and linguistically diverse backgrounds. This attitude of openness may have the power to transform their students' views about multilingualism. In the case of the ideal teacher (i_e. strand 6 in Table 5), those subjects who had shortly lived abroad also have a clearer idea about what to be a multilingual teacher entails.

All things considered, this follow-up study confirms that the internal and external factors analysed have not affected teacher trainees' beliefs. Yet, a portrait of teachers whose views are more aligned with multilingual principles might be sketched out as follows:

- (1) Male participants are more inclined towards multilingualism than their female counterparts.
- (2) Speakers of minority (i_e. Catalan) and heritage languages (i_e. Romanian) show greater sensitivity to multilingualism than speakers of majority languages (i_e. Spanish).
- (3) Respondents with a higher English proficiency are more welcoming towards multilingual teaching and learning than those with a beginner level of competence.
- (4) Prospective teachers with a bachelor in Infant education are more prone to engage in multilingual teaching practices than Primary teachers-to-be.
- (5) Unlike participants enrolled in Spanish-based school programmes, those coming from Catalan-based schools appear to accept more willingly the multilingual turn.
- (6) Subjects who did not receive private lessons in the L3 are more knowledgeable about multilingual education than those who got extra-tuition.
- (7) Future teachers with higher extramural English exposure are more supportive of multilingual education than those with no out-of-school contact.
- (8) Those respondents who enjoyed a short-term abroad period are more disposed to take on board a multilingual and intercultural approach to education than those who did not have that opportunity.

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6. Concluding remarks

The recent impetus given to research on teacher cognition and multilingual education has not fully reached a population of pre-service Infant and Primary teachers, whose beliefs have been scarcely examined thus far (exceptions include Martí & Portolés, 2019; Portolés & Martí, 2020; or Schroedler & Fischer, 2020, With a research sample of 121 undergraduates trained in a state-run university based in a multilingual region, as is the Valencian Community, the present study aims to explore the influence of internal (i.e. gender, L1 and proficiency level) and external factors (i.e. teacher background training, language programme, extra-tuition in the L3, out-of-school contact and stay abroad period) on prospective teachers' perception on multilingualism.

The impact of this cluster of individual factors on our participants' beliefs has not been substantiated, since these have not been altered in any significant ways. Still, our analysis suggests that teacher trainees whose views towards multilingualism are more respectful tend to coincide with: (1) male students, (2) Catalan and Romanian L1 speakers, (3) higher competent users of the L3, (4), Infant student teachers, (5) enrolled in Catalan-based school programmes, (6) with no access to extra-tuition in the L3, (7) more out-of-school contact; and, (8) a short-term stay abroad period.

Several limitations constraining our findings should be noted. First, the homogeneity and small sample-size. Second, the cross-sectional design of the study. Third, the lack of data triangulation. These three areas of improvement would benefit from future work, which should (i) include a larger population from other Valencian or Spanish universities, more representative of student teachers' cognition on multilingualism, which may account for more differences across variables; (ii) carry out a longitudinal designed study that can follow participants' teacher professional development by comparing beliefs and actual teaching practices, two sides of the same coin that, as Basturkmen (2012) cautions us, do not always match; and, (iii) triangulate data by incorporating more qualitative sources of information like participants' interviews or group discussions.

Despite the aforementioned limitations, this follow-up study may stand as a useful contribution. On the plus side, it could be said that, in the main, prospective Infant and Primary teachers hold mildly positive beliefs about multilingual education. On the minus side, our findings have unveiled the survival of some monolingual ideologies in several controversial issues, such as the persistent myth that very young learners can learn English easily and quickly. The fact that this counterevidence exists and that some wrong beliefs seem unaffected by instruction on multilingual pedagogies, let us conclude that the design of optimal multilingual didactics courses, which may help shape teacher cognition on multilingualism, is of utmost importance.

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