

# MEASURING PARENTS' MOTIVATION TO PLURILINGUALISM: DEVELOPMENT AND VALIDATION OF A MODULAR INVENTORY

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## 1. INTRODUCTION

The fact that languages represent an asset for the access to equity capital that individual need to thrive is well established (Vaillancourt, 1983; Grin, 1994), to the extent that plurilingualism is now considered an additional advantage, especially in education. Hence parents often show preference for bilingual programmes, especially when they are taught in languages of recognized international prestige. However, not always the same goes when pluri-/multilingual education is provided through minority languages, as heritage language education still raises some doubts even among heritage language speaking parents (Hyun-Sook, 2015; Juan-Garau, 2014).

According to Bronfenbrenner's ecological systems theory (1977), child's development depends on the interrelation of 5 different dimensions, or systems, which include a list of factors influencing a child's life. These systems range from the intimate and relational sphere (family, school, peers, neighbors, daycare facilities, religious organizations, etc.) to the external environment (cultural and political attitudes, environmental changes, economic situation etc.). As parents are likely to play a crucial role in monitoring these dimensions and their development, Bronfenbrenner's theory has been tested according to parents' agency (Darling, 2007). According to this theory, monitoring can be defined as "a promotive proximal process fostering a positive developmental outcome" and it would have the greatest effect not only "in environments with the greatest [educational] resources", but especially "for individuals who had the greatest ability to take advantage of those resources" (Darling, 2007: 210). Despite the importance of parental monitoring, fewer studies have focused on this subject compared to the great attention paid to teachers' beliefs.

The development of a research instrument able to fill this gap can represent a useful step towards identifying and developing a finer perspective on parental support to language education. The present study presents the development and validation of a Modular Inventory for measuring parents' motivation to plurilingualism. This questionnaire was designed as a report to gain information not only about individual participants and the languages spoken in the home, but also about their attitudes towards the role of language and plurilingual education. The main purpose was to equip education bodies with a tool adopting a systemic and more ecological perspective to language education in multilingual multidiverse environments.

The rest of the article proceeds as follows: first, we will present a literature review of the different possible facets of parents' motivation concerning language education. Second, we will describe the development and validation of a measure that assesses the

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measure of parents' motivation to plurilingualism. Here, we will present the development of PMP phase at the end of which we tested pilot structure of the PMP via an Exploratory Factor Analysis (EFA). Then, we will proceed with the confirmatory factor analysis (CFA) to validate the PMP. Lastly, we discuss the results of our study and the usability of the PMP for research and practice.

## 2. FACETS OF PARENTS' MOTIVATION TO PLURILINGUALISM

Three main dimensions have been thus used to describe parents' motivation towards plurilingualism and, hence, plurilingual education. The dimensions considered in this study are employment, heritage maintenance and socialization. In the following paragraphs, we will take a closer look at them.

First, for the employment reasons, current studies found that, as expected, being able to speak both international languages like English, French and German and local languages, significantly increases the chances of employment, not only in terms of earning but also in terms of quality (Budría *et al.* 2019; Gazzola, Mazzacani, 2019). This last consideration concerns particularly the immigrant population. However, even if employment seems the strongest argument in favor of language learning, Gazzola and Mazzacani warn against possible generalizations: "part of the variation in the employment status could be explained by the different linguistic requirements in different types of occupation and/or sectors of economic activities" [across countries]. According to the authors, knowledge of English and French is indeed far more useful in public administration than in construction and, Budría *et al.* (2019) find that knowledge of Spanish for immigrant in Spain is only another determinant of white-collar jobs, but not the most important (as the level of education, turnover rate, expected productivity and age at the start of the long-term labour market career). Despite these distinctions, in general, parents tend to consider languages as an important asset for their children's future, especially in those countries where plurilingual parenting and multilingualism is encouraged (Antony-Newman, 2022) or when it comes to English considered as the optimal response to global mobility (Wao, Gao, 2021; Hayden, 2012).

A second facet we consider here, however, is how education in general and language education, more specifically, are perceived by parents to be related to culture transmission. The EMI model (English as medium of instruction), which is undoubtedly found to be efficient in certain contexts, may arise and have backlash effects on the parallel maintenance of heritage culture in some other contexts (Hayden, 2011) and thus needs to be considered in combination with other forms of plurilingualism. The concept of acculturation (Berry, 2006) is a phenomenon, which results from "continuous, first-hand contacts" (Redfield, 1936) between two distinct cultural groups, taking place both at individual and group-level. According to acculturation's theory, some tangible changes, more than others, are crucial for the process of acculturation, like language changes. Since decisions need to be made both on second language learning, on one side, and on heritage language maintenance, on the other, parents' reflection on language education, in addition to employment arguments, incorporate thus also cultural motivations. Items like "It is important that children know the language and the culture of their parents" of the PMP aim to test these aspects.

Parents' motivations towards heritage (language) maintenance have been largely explored and have proved to be generally related to the possibility for the child to stay in contact with the language community, to the parents' language use preferences (De Houwer, 2007) and to the maintenance of the family ethnic identity (Hyun-Sook, 2015).

The third facet of parents' motivation explored is socialization which falls into the process of acculturation and entails the creation of significant relationships in the surrounding environment. Language socialization refers, more specifically, to "the development of cultural and communicative competence" and to "how people learn how to take part in the speech events and activities of everyday life" (Duff, 2010: 427). According to the language socialization theory, significant relationships that take place in one language represent an important step towards acculturation that parents may or may not desire for their children to happen in a second language. According to some studies, parents can perceive majority language as better suited for children's community development while minority language as an obstacle to it (Paugh, 2005). Some other studies show that, conversely, parents associated heritage language interaction with the expression of emotional speech functions and with a number of culturally specific characteristics positively assessed within the community (Paugh, 2000, 2005: 1817). Questions like "Italian is important for making friends" of the PMP aims to test the degree of cultural and social permeability that parents wish for their children.

### 3. A MODULAR INVENTORY TO MEASURE PARENTS' MOTIVATION TO PLURILINGUALISM DEVELOPMENT

The PMP inventory aims at capturing the facets of employment, cultural and society reasons as separate scales, in addition to general assessments of one's own parental motivation to plurilingualism. These distinctions are the basis for two modules. These modules can be used by researchers and practitioners both separately and jointly, namely Module 1 assesses facets of plurilingualism, and Module 2 assesses parents' orientation to plurilingualism.

The first version of the PMP was developed by five researchers among which four were experts in plurilingualism and one was expert with scale development. The four experts in plurilingualism worked individually for the item generation and item ratings. The remaining expert in scale development followed the individual process and collected the final items which resulted into 35 items. Another group of ten experts in plurilingualism composed the group of experts who evaluated the items. They were instructed to evaluate and group the items into categories following their expertise. At the end of their evaluation, the first group of four plurilingualism expert analysed their results and composed the ultimate structure of the PMP following the item evaluation and grouping carried out by the group of experts. Basing on an agreement of above  $k = 95\%$ , the items for inclusion in the pilot study were selected following criteria of comprehensibility and centrality scores. This referred to differences in the evaluation and aimed at ensuring content breadth through different perspectives and not too similar wording. At the end of the items development phase, the resulting PMP inventory consisted into  $N = 20$  items among which  $n = 5$  for the general assessment of parental motivation to plurilingualism (PP),  $n = 6$  for the employment reasons,  $n = 4$  for the cultural reasons, and  $n = 5$  for the society reason (see Appendix A).

## 4. PILOT STUDY

### 4.1. Procedure & Participants

As noted, we started with piloting the structure of the PMP in order to further proceed with its validation. To pursue this, we realized an online survey protocol comprising the

PMP items and demographics. Using the online survey software Microsoft Form, a broad range of parents of nursery schools were invited to participate via newsletters, internet forums and social media platforms. Participants received no incentives, and the survey took between five and seven minutes for them filling in it. Analyses have been conducted using SPSS (version 22).

The online questionnaire was used to assess demographic variables and the initial version of PMP consisting of 20 items. PMP items were answered on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The following demographic variables were assessed: age, gender, education, nationality, mother tongue language and the number of known languages.

We sent the invitation to participate in the study to 55 families which consisted in approximately 110 parents. A total of  $N = 94$  participants answered the survey with a response rate of 86,4% ( $n = 62$  were female,  $n = 31$  were male, and  $n = 1$  reported a different gender orientation without specifying; average age 37, ranging from 24 to 48 years). Half of the participants ( $n = 47$ ) were Italian and Italian mother tongue while the rest of the sample was composed by participants from different African, Asian, European, and South American Countries. The 17% ( $n = 16$ ) reported to be able to speak only one language, 41.5% ( $n = 39$ ) two languages, 26.6% ( $n = 25$ ) three, and the remaining 14.9% ( $n = 14$ ) four languages. A large proportion of the sample reported to have a high-school diploma ( $n = 42$ ),  $n = 23$  reported to have a master's degree, with  $n = 7$  reporting additional specialization (e.g., PhD title), while the remaining sample reported to have lower educational levels ( $N = 17$ ) or did not report an educational background at all ( $n = 5$ ).

## 5. RESULTS

### 5.1. *Internal Consistencies*

Reliability analyses showed good internal consistencies according to Cronbach's Alpha. First, all items had item-total correlations above .60 (Nunnally, 1967). We reduced the number of items per scale to three in order to increase the economy of scales without compromising reliability. Notably, we controlled for Cronbach's Alpha if items were dropped. At the end of this process, 13 items remained for four scales, namely PP (number of items = 4,  $\alpha = 0.77$ ), employment reason ( $\alpha = 0.65$ ), cultural reason ( $\alpha = 0.68$ ), and social reason ( $\alpha = 0.65$ ).

### 5.2. *Exploratory Factor Analysis*

Then, we tested the structure of the PMP via exploratory factor analyses (EFA) with principal axis factoring with oblique rotation (Tabachnick et al., 2007). Loadings on the respective factors were strong for PP (from  $r = 0.44$  to 0.85), for employment reasons (from  $r = 0.65$  to 0.68), for cultural (from  $r = 0.53$  to 0.79) and for social (from  $r = 0.44$  to 0.79). The factor correlation matrix contained correlations between factors of more than 0.36, thus indicating that an oblique rotation was appropriate (Tabachnick et al., 2007). In total, the four factors explained 51% of the variance. The EFA thus confirmed the four-dimensional solution.

## 6. VALIDATION

To validate the PMP, we conducted a large-scale study among parents through which we tested the overall structured tested in the pilot phase and validate the modular structure of the PMP. The questionnaire has been administered in its pilot version with a reduction in items.

### 6.1. Procedure & Participants

As in the previous phase, an online study comprising the PMP inventory together with demographics was constructed. Using the online survey software Microsoft Form, a broad range of parents of elementary and lower secondary schools, belonging to the same Institution, were invited to participate via newsletters, internet forums and social media platforms. Participants received no incentives. For the establishment of factorial validity, confirmatory factor analysis was applied. In a final step, we examined the PMP with regard to general demographic associations. Analyses have been conducted using SPSS (version 22) and the additional module for analysis of moment structure (AMOS).

The online questionnaire was used to assess demographic variables and the version of PMP consisting of 13 items. Accordingly, we employed the four scales of PMP resulting from the pilot study described above. All scales were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the present validation study, internal consistencies were good with a Cronbach's alphas for PP (number of items = 4) = 0.72, equal to .60 for employment reasons (number of items = 3), to .70 for cultural reasons (number of items = 3), and to .69 for social reasons (number of items = 3). See the Appendix, table 1, for the Italian and English versions of the PMP. Lastly, we assessed specific demographics, namely age, gender, education, nationality and number of known languages.

A total of  $N = 227$  parents completed the entire questionnaire (79.3% female, 19.8% male, mean age 39 years, ranging from 18 to 53 years), approximately 30% of the total school families. A large proportion of the sample reported to have a high-school diploma (48%,  $n = 109$ ),  $n = 60$  (23.3%) reported to have a master's degree, with  $n = 11$  reporting additional specialization (e.g., PhD title), while the remaining sample reported to have lower educational levels ( $n = 36$ , 15.9%) or did not report an educational background at all ( $n = 11$ , 4.9%).

Half of the participants ( $n = 122$ ) were Italian and Italian mother tongue while the rest of the sample was composed by participants from different African, Asian, European, and South American Countries. Of them, the majority was Portuguese mother tongue (11%), and Ukrainian mother tongue (9.6%). The 15.4% of the sample ( $n = 35$ ) reported to be able to speak only one language, 39.2% ( $n = 89$ ) two languages, 32.2% ( $n = 73$ ) three, and the remaining 13.2% ( $n = 30$ ) four languages. The neighbourhood where the school is located is in the southwest of the city of Verona (province in the north of Italy) and it welcomes many newly immigrated families. Families with migrant background represent 40% of the total school families, approximately four times more than the regional percentage. The school has been characterized in recent decades for a special focus on school inclusion, both in pre-school schools, as in primary and lower secondary education.

### 6.2. Results

As a preliminary step, descriptive statistics of the PMP Inventory were calculated. The skewness (range: -1.79-1.58) and kurtosis (range: -.254-1.20) values for each item were tested to not exceed +/-2, thus supporting normality assumptions (Trochim, Donnelly, 2010). Table 1 shows intercorrelations, mean scores, and standard deviations for the four PMP inventory scales.

Table 1. *Intercorrelations, means and standard deviations of PP scales*

		M(SD)	1	2	3	4
1	Plurilingualism	4.66(.4)				
2	Employment reasons	4.52(.47)	.553***			
3	Cultural reasons	4.46(.51)	.471***	.325***		
4	Social reasons	4.3(.52)	.251***	.361***	.223***	

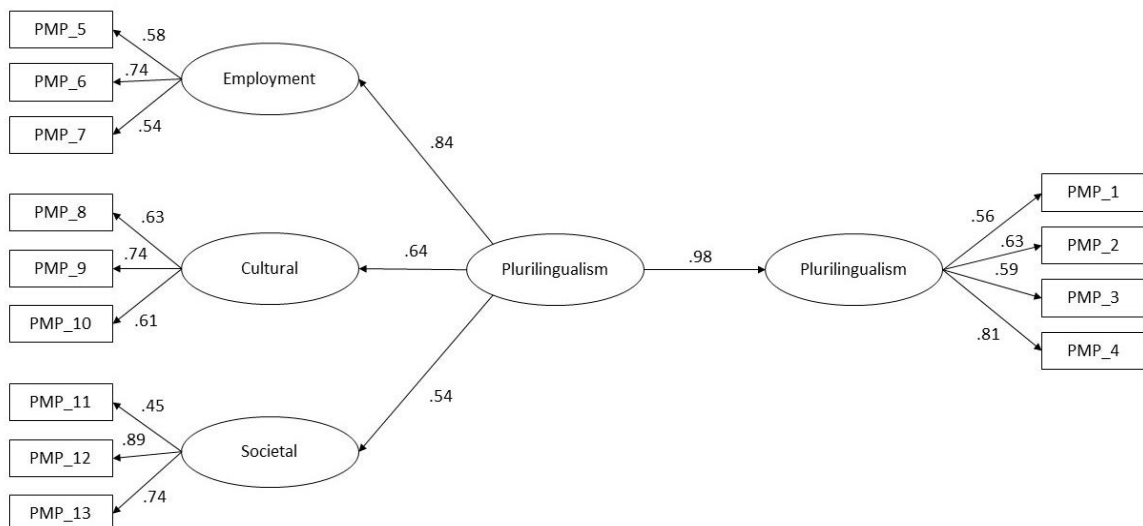
Note. \* p < .05, \*\* p < .01, \*\*\* p < .001

### 6.3. Confirmatory Factor Analysis

We conducted the Confirmatory factor analysis (CFA) to examine the factor structure of the PMP inventory. First, we tested the scales specified as separate factors which led to a good model fit ( $\chi^2(58) = 121.03, p < 0.001, SRMR = 0.054, RMSEA = 0.069, CFI = 0.95$ ) and in line with recommended cut-off scores ( $CFI \geq 0.95; SRMR \leq 0.06; RMSEA \leq 0.08$ , e.g., Hu & Bentler, 1999). No error terms were allowed to correlate.

Then, we proceed confirming the modular structure of the PMP scales via CFA. The four facets of plurilingualism served as indicators of a latent construct which, in turn, predicted the PP. In this case, the model fit was very good confirming that the modular structure of the PMP was significantly a better model with  $\chi^2(58) = 116.33, p < 0.001, SRMR = 0.054, RMSEA = 0.06, CFI = 0.95$ . No error terms were allowed to correlate. As reported in Figure 1, the three facets of PMP served as indicators of a latent construct with parameters ranging from .54 to .84 which, in turn, predicted the PP (.98).

Figure 1. *Graphical depiction and parameters of the modular structure of the PMP inventory*



## 7. DISCUSSION AND CONCLUSIONS

This study was an investigation into parents' motivation towards plurilingualism as an independent variable and a possible outcome of their children language education. The theoretical premise was that parents play a central role in the schooling process as they have a monitoring and fostering role in the way their children cope with school activities. We were interested in discovering how languages are valued and which kind of investments they represent, irrespective of the language family background and prestige of the language of instruction. The vision adopted by this article is multifaceted: plurilingualism was considered as a tool to improve the child's probability of a better future, in terms of employment, social and cultural achievement. The objectives were twofold: comparing different dimensions of plurilingual education as reflected in parents' motivation towards plurilingualism and testing the effectiveness of a research tool to measure this phenomenon.

In the first respect, the study confirmed that the value generally attributed to languages from policy makers and the scientific community, to name but few, shaped a shared perception which include parents' as major agents of the child's education. In addition, from the point of view of the parents who participated to the study, the four dimensions identified equally contribute to a large, albeit significant, definition of plurilingualism. Most notably, all the four dimensions were considered equally valid motivations in favour of plurilingualism and plurilingual education (see Fig. 1). It is interesting to observe that, contrary to our expectations, the unanimous agreement concerning the social value of plurilingualism, and regardless of the migration background of the family, shows the parents' growing awareness of the current multicultural and multilingual character of society.

With respect to the effectiveness of the scale, following Bronfenbrenner's model, to map the underpinning dimensions of Plurilingualism Orientation within parents, the validation studies (Pilot Study and Study 1) provided sufficient evidence of the validity and consistency of the PMP inventory. Notably, while the EFA suggested the factorial structure of the PMP with 4-factors, the CFA confirmed it as well as the relation among the factors. Moreover, the CFA with a second order factor (see Figure 1) indicates the validity of the two separate Modules, i.e., Module 1 and Module 2.

### 7.1. *Limitations*

The present study aims at validating a first inventory for the assessment parent's motivation to plurilingualism, i.e., the PMP inventory, yet the study presents some limitations that must acknowledge. First, the study limited the validation of the PMP to EFA and CFA while no convergent and discriminant validity was tested. This represents the main limit of the study as there are no evidence of the convergent validity of the PMP inventory with additional measures that might be used in the investigation of parent's motivations. Likewise, without discriminant analysis, the validity analysis of the PMP is limited to the results of consistency and CFA. However, to our knowledge there are no prior published studies that have investigated such dimensions via the use of self-report measures. In the absence of validated measures that suited within the scope of our analysis, we opted for a unique analysis of factors and consistency. In this sense, future studies might address this gap by realizing additional measures that can include motivational and behavioural aspects (e.g., proactive behaviours in language learning) relating to parent's motivation to plurilingualism. Second, our study did not involve any

kind of compensation for the participants to the survey. This means that our participants could have been interested in the participation due to a self-selection bias. Accordingly, future studies could use monetary reinforces to foster participation and avoiding social desirability of participants. However, given the time-fatigue for the completion of our questionnaire, the fact that we did not have missing data within the participants means that they were highly motivated and have probably filled in the questionnaire accurately. Lastly, our sample limits to parents from the Italian context with most Italian native speakers. Considering the relevance of the sample requires a numerous participation of parents and from different background. We encourage authors to address this gap to increase the potential of the PMP scale by evaluating its validity cross-culturally.

## 7.2. Implications

The study set out the basis for improving our empirical knowledge on the role parental motivation to plurilingualism.

First, as the first tool for assessing parents' motivation to plurilingualism, the PMP can be used to realize investigation on the effects of parents in language development within children. Likewise, the tool can be used as a research instrument for the investigation of very different aspects related to plurilingualism and plurilingual education of children. Second, this tool can be used by practitioners (e.g., teachers, trainers) to evaluate parents' orientation to plurilingualism in the context of curricula development, for instance. Given that plurilingual approaches are becoming more and more widespread, understanding the kind of motivations that parents could have to support (or not) the development of plurilingualism, would make training proposals more meaningful (for example, giving emphasis to benefits which are disregarded by families or enhancing shared values). Additional applications of the PMP outside the research context may regard the assessment of children and parents during the school year to understand possible relations between children's skills and parents' role. Finally, the tool can be used when proposing training interventions in the classroom as a control variable that might affect the effectiveness of the training in the view of parent's influence.

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## APPENDIX

### Plurilingualism:

1. It is important that my child learns different languages.
2. It is important that my child learns English.
3. I like that my son knows the languages of his classmates at school.
4. I like that my son's teacher also speaks other languages at school (in addition to Italian).

### Employment:

1. It is important to speak many languages in order to find work in Italy.
2. In order to work it is important that my son knows Italian well.
3. (If your mother tongue is not Italian) In order to work it is important that my son speaks my mother tongue well.

### Cultural:

1. It is important that parents speak their mother tongue to their children.
2. It is important that children know the language and the culture of their parents.
3. It is important that children can talk to grandparents in their mother tongue or dialect.

### Societal

1. Italian is important for making friends.
2. For children it is important that parents speak Italian well.
3. Speaking many languages correctly facilitates my child's social relationships.

