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# Understanding parents' pragmatic and emotional attachments to "their" language in multilingual family contexts: exploring self-assessment options for family well-being

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## Abstract

In recent years, the conceptualisation of heritage languages in both family and society has received increased attention, including the motivations behind heritage language maintenance. This paper explores the development of the Heritage Language Identity Questionnaire (HLI-Q) as a tool for facilitating reflective discussions with parents in multilingual family contexts. Informed by preceding studies which established a theoretical framework to help describe parents' pragmatic and emotional attachments to "their" language within the family context, an initial form of the HLI-Q instrument was administered to 505 participants for further development. Exploratory factor analysis of the resulting data is supportive of the four factor theoretical model while also yielding a helpfully reduced set of 20 questionnaire items, facilitating further use of the instrument by professionals and parents to help explore their attachments to linguistic heritage within their family contexts. The study contributes an important tool to improve understanding of emotional and pragmatic reasons behind heritage language maintenance, opening up opportunities for family support and further research with specific population groups.

**Keywords**: heritage language, multilingual, parent, emotions, questionnaire, self-assessment

## Introduction

In the UK, more than 20% of primary school children are registered as speaking English as an additional language (Department for Education, 2020). On average, 14% of the UK population were born abroad (House of Commons Library, 2022), and 28% of children under the age of 18 have at least one parent who was born abroad (Migration Observatory, 2022). Against this backdrop, the scope of research in the area of multilingualism and identity has been increasing in recent years. In particular, over the past two decades, the links between language, identity, and well-being have received growing attention, both from the perspective of parents (Okita,

2002), and children (Müller et al., 2020; De Houwer, 2017, 2020), with some focusing specifically on anxiety (Xiao & Wong, 2014; Sevinç, 2020).

While the terminology around multilingual families is complex, we use the term "heritage language" according to Baker's (2011) definition of the "intergenerational transmission of a language" (p.49). Previous research (Little, 2020) showed that parents' attitudes towards passing on their language was driven by both emotional and pragmatic considerations, and, unsurprisingly, that the emotional attachment was more closely linked to mental well-being. Furthermore, parents who had strong emotional attachments to their heritage language often felt unable to articulate their need, either to formal education settings, or even in the family context, leaving them feeling pressurised and, at times, misunderstood. This study builds on that research by expanding it towards a quantitative element, specifically by seeking to create a knowledge base around how clearly defined these various emotional and pragmatic attachments are, and what opportunities there might be in using a self-assessment tool to help individuals to understand them. We therefore focus on the research question

*How do parents self-assess their emotional and pragmatic attachments to their language in a multilingual context, via a custom-built "Heritage Language Identity Questionnaire" (HLI-Q)?*

Exploratory factor analysis of data from 505 psychometric tests led to the development of a scale for the purposes of providing self-assessment opportunities for multilingual parents, functioning as conversation starters and facilitating a more cohesive understanding of different attachments within the family context, ultimately improving family communication and well-being. While it is understood that the concept of identity is fluid and evolving (Edwards, 2009), by gaining an overview of trends and commonalities, the research significantly contributes to our understanding of multilingual parents' mind sets, and highlights the relationship between emotional and pragmatic attachments to language, and how these correlate to family circumstances and parenting attitudes. This understanding, as well as creating a way for parents to self-assess, is vital in informing educational institutions, healthcare professionals, and the social system, at a time when these families are more and more becoming the norm, rather than the exception, in previously predominantly anglophone contexts.

**Heritage language attitudes**

Ivanova (2019) calls heritage language an "essentially sociolinguistic phenomenon" (p. 2), since the language acquisition itself is inextricably linked to language loyalty, attitudes, and experiences that shape the individual's and the family's sociocultural and sociolinguistic context. While attitudes towards the heritage language have been the focus of research for some time (Budiyana, 2017; Xiao & Wong, 2014), the focus on attachments, and specifically the form these attachments take, are much more scarce.

In the literature on attitudes, the juxtaposition of positive/negative attitudinal stances is prevalent, particularly with view to exploring intergenerational differences, and in exploring the link between parental attitude and motivation to maintain the heritage language, with positive attitudes traditionally being linked to higher levels of attachment and motivation (Budiyana, 2017).

**From attitudes to attachments**

As migration patterns and globalisation become ever-more diverse, focusing primarily on positive and negative attitudes then becomes less helpful, and a more complex framework is needed, which can not only be used to highlight existing and fluctuating attachments to the heritage language, but can also explore these in a nuanced way, potentially paving the way for improved self-awareness, highlighting links between attachments and parenting styles, and provide individuals with the personal tools to discuss language at family level. Work on emotions that are linked to bilingualism have long highlighted that different languages may spark different emotions, and indeed different senses of identity (Dewaele & Pavlenko, 2001/2003; Panicacci & Dewaele, 2017).

The framework underlying this paper was developed in previous research (Little, 2020). The framework explores emotional and pragmatic attitudes towards the heritage language, each within the context of existing at both an essential and/or peripheral level. This then leads to a pictorial definition of the framework as having two axes (essential/peripheral and emotional/pragmatic), ultimately creating four quadrants:
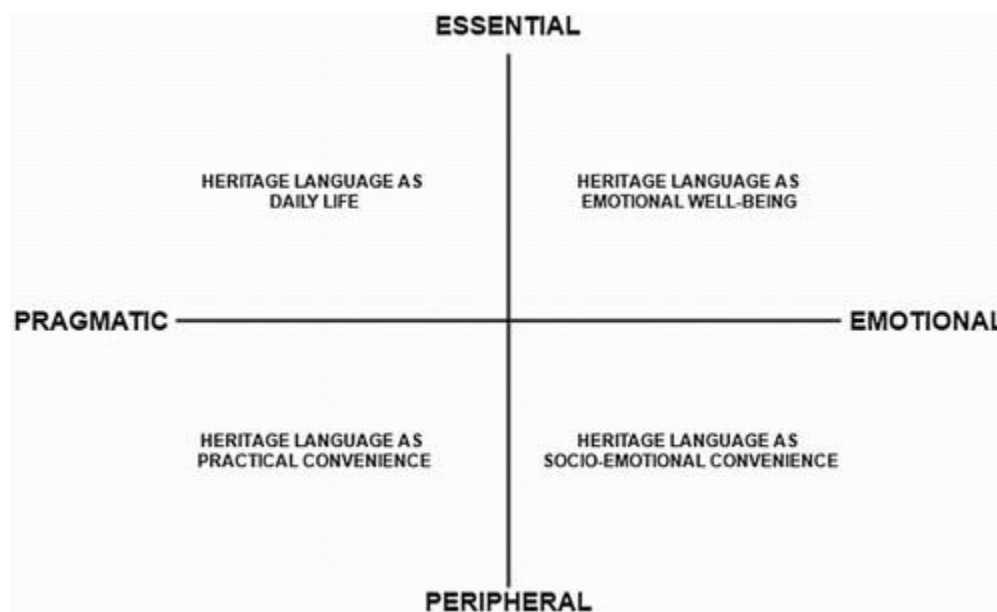


(Little, 2020)

The framework was developed iteratively from the responses given by 212 parents in a questionnaire, with 10 of these being interviewed. The resulting paper (Little, 2020) proposes that, while all individuals may occupy all quadrants to a certain extent, and while this occupation may fluctuate, understanding more about parents' emotional and pragmatic attachments to the heritage language may be helpful in designing support programmes, as well as for family communication itself, enabling parents to articulate their hopes and fears regarding heritage language acquisition to each other, and to their children, facilitating child agency (Smith-Christmas, 2020).

**Exploring heritage language, mental health, and well-being**

The pressures and well-being considerations linked to heritage language maintenance have mainly emerged in the last two decades, from Okita's (2002) groundbreaking book on the emotional labour of Japanese mothers, to more recent work on exploring the dynamics in linguistic intermarriages (Torsh, 2020). What is of interest in this work is that both the lion share of the emotional labour, and the mental health impact linked to heritage language maintenance, are typically linked to the women in these studies, with a small but growing body of literature focusing specifically on fathers (Kim & Starks, 2010; Jackson, 2006).

Patalay and Fitzsimmons (2016) in the Millenium Cohort Study identify only a weak correlation between mental health and well-being in 11-year-old children, assigning mental health to externally observable and distinguishable criteria, whereas well-being is classed as being self-reported. However, their study had no real way to explore what language means to the individual. Patalay and Fitzsimmons link well-being to relationships and social life, with ethnicity, health and chronic conditions being linked to mental health. Language, however, as an integral part of identity (Edwards, 2009), 'closely and inseparably entwined with the nature of being' (Evans, 2018, p. 7), and as the medium through which we experience the world, has the potential to impact on well-being and mental health alike. In fact, research shows clearly how heritage languages are linked to anxiety and other strong emotions, ultimately having an impact on mental well-being (Okita, 2002; Torsh, 2020). Parents' attachment to the heritage language regularly leads to choices with regards to family language policy and parenting style. Wang (2023) reports on a parent going to the lengths of refusing breakfast to their daughter in an effort to maintain Chinese, while the practice of not responding to the non-heritage language is not uncommon (Gharibi & Mirvahedi, 2021). At the same time, open discussion of family language policy can help inter-family understanding (Little, 2019, 2024). The statements developed for this paper are therefore developed on the basis of careful literature research, before moving to testing how these statements perform in relation to the four quadrants of the framework (Little, 2020). Using the process of self-assessment, this study therefore focuses on well-being as a route into facilitating self discovery and intra-family understanding.

**Methodology**

The study took as its starting point the framework on heritage language identities, introduced in Little (2020). Methodologically, then, this study sought to create conditions where parents would be able to explore their own perceptions of the heritage language, and use their results, if so desired, to facilitate family discussions. In this, the study embraced Lock & Strong's (2012, p. 5) social constructionist approach, encouraging reflection and identity construction through immersion in shared experiences with other people, although the processes for and effectiveness of this will need exploring in future papers.

*Research Design*

While a number of scales, questionnaires and measurements exist to explore multicultural personality (Van Oudenhoven & Van der Zee, 2002), children's multilingual identity (Haukås, Storto & Tiurikova, 2021; Bailey, Parrish & Pierce, 2023), bilingualism and emotion (Dewaele & Pavlenko, 2001/2003), acculturation and self-perception (Panicacci & Dewaele, 2017), and predictors of parental heritage language maintenance efforts (Hollebeke et al., 2022), these were not deemed appropriate for adoption in the present study, with its specific focus on emotional and pragmatic attitudes and attachments linked to parenting.

The developed format involved a psychometric test, which displayed results graphically, with each quadrant's size corresponding to the scale of importance calculated from the answers. A total of 42 statements, were developed to correspond to the four quadrants, with each quadrant being explored by 12 Likert-type items - in some instances, certain items corresponded to more than one quadrant, especially where it was unsure how these items would map to the framework. Following exploratory factor analysis, we were able to reduce the number of statements to 20, focusing on those that most clearly aligned with the respective quadrants, and offering a scale for further research and development.

Statements were grouped to refer to "Me", "Family", "Community" and "Children", to ensure all aspects of multilingual parenting were explored. Furthermore, the questionnaire asked about location of the participant (country), first language of participant, family configuration (number of parents/carers in the home, number and age of children), language/s to be passed on by different family members. For all language-related questions, participants were able to choose from a drop-down menu of 189 languages, or add their own. Entering multiple languages was always an option, to avoid participants having to make binary choices. We know that heritage language families have complex relationships with the various languages spoken and passed on in families (Little, 2020), making it difficult to be precise in giving a numerical overview of languages spoken. Between them, the 505 participants listed 49 individual languages they sought to pass on, with 31 of them stating that they themselves (rather than their partner, or the

family as a whole) were looking to pass on more than one language to their child. In order to capture heritage language identities, participants were encouraged to focus on their attitudes in relation to *one* language they wished to pass on to the child, and, if they chose to do so, repeat the HLI-Q again with the other language they were looking to pass on as the focus. Looking at the data, none of the 31 participants chose to go down this route, but this presents an opportunity for further research, in order to understand different attitudes not just within families, but within a single person.

This paper presents the findings of an analysis of 42 survey items, resulting in a set of 20 statements which performed best in the exploratory factor analysis

### *Reliability, validity and generalisability*

Any attempt to assess and compare emotional and pragmatic attitudes on a large scale faces rightful critique regarding reliability. Ranging from response bias effects like social desirability and acquiescence (Furnham, 1986) to emotional dispositions, embedding these concerns into the research design has been a core focus. Boyle, Saklofske and Matthews (2014) point out the complexities of measuring emotional dispositions, and warn against treating these as stable constructs. Furnham (ibid) outlines that social desirability and acquiescence can be minimised if participants perceive a benefit from giving answers that are as "true" as possible. In this study, where results led to advice on parenting and discussing the heritage language, it is therefore assumed that participants had a vested interest in giving answers that they perceived as "true". At a purely pragmatic level, there were no missing values for any of the variables used in the analysis for the full set of 505 cases, resulting in a full dataset for analysis, increasing reliability and validity.

In heritage language families, while the generic attitude towards the language is unlikely to change in a parent, there are undeniably variations, such as spikes in the run-up to visits to the country, or national holidays (Little, 2020). It is therefore acknowledged that any measurement is only the measurement of a point-in-time, and that fluctuations may occur - a fact that was related to participants in the accompanying information.

Despite these fluctuations, moods are considered to be relatively stable (Boyle et al., 2014), and so the questionnaire sought to establish largely more overarching themes, for example via families' circumstances (e.g. "The family language is necessary to be part of our local community") and general emotional attitudes that are less likely to change (e.g. "The family language is important to me to express and connect with my emotions"). In this way, although some fluctuations are expected, the research outcomes are deemed to be both reliable and valid.

Despite the argument that no two heritage language families are identical (Little, 2020), a core aspect of the study was to seek to develop an instrument that can be used to open up discussions about the heritage language at family, community, or formal education level. Generalisability is therefore less a concern than "general applicability", i.e. is the HLI-Q working in creating different attitudinal profiles, a question we will return to later on.

### Ethical Considerations

Although the questionnaire asked for information such as languages spoken, number and ages of children, the scale of the questionnaire, and the aggregation of results, meant that individual responses were almost impossible to lead to identification of families. While it was possible to submit an email address for those interested in participating in future studies, these addresses were immediately removed from the overall data, and held separately.

The commitment of time to the research process is a cost in both qualitative and quantitative research, and thus an ethical responsibility. Couper et al. (2008) identified a number of reasons for participation, including a self-identified benefit or interest. In this study, participants were given their own results, together with prior research findings and "hints and tips" relating to each quadrant. This meant that participation resulted in participants receiving tangible information for families to take forward, which was deemed an appropriate reward for participation, with anecdotal evidence (personal emails, comments on social media) indicating that these were indeed appreciated.

### Pilot

Following the design, the questionnaire was shared among one particular parenting group via social media, with multilingual parents invited to pilot, and to feed back about their experiences. The pilot was stopped after twenty results had come in. The feedback indicated that users found the questionnaire itself easy to use, and the results page helpful. Based on feedback, the start page was amended slightly to avoid overly academic jargon. Importantly, there was confusion about the term "heritage language". Pilot participants suggested the term "family language", and this was adopted, with a specific note for participants to focus, in answering the questions, on the family language they themselves were looking to pass on to the children. Beyond this, no further adjustments were made.

### Participants

Although active recruitment was limited to UK participants, the questionnaire was shared organically. Invitations for participation were shared with a total of 663 heritage language

schools and multilingual organisations in the UK, identified via openly accessible contact details, including by email, messages on social media, and website contact forms. Thirty-two of these messages were recorded as undeliverable. While sending messages does not equal that these messages are being read, or being forwarded, the approach ensured that 631 appropriate organisations and groups were made aware of the research within the UK context. Due to the social media aspect, it was not surprising to see that the research was shared more widely, both to Britons living abroad, and to a variety of other family and geographical configurations. While all families could be said to live in a multilingual context (e.g. navigating a home language and a societal language), families were distinct and different within their own set-up, ranging from families where both parents sought to pass on the same language, to quadro- and even quintilingual families, which, due to family composition, migration, older relatives, etc. had highly complex family language contexts. While future papers may focus on the intricacies of these differences, this paper focuses specifically on the psychometric aspect of the questionnaire, seeking to provide a quantitative analysis of parents' responses, providing a statistical, comparative overview which aims at understanding over-arching patterns of commonalities and discrepancies linked to parental attitudes towards heritage language maintenance.

With the HLI-Q being available online, the purpose of the study, and the use of data were explained on the landing page - the page also included a brief explanation of terminology. With the complexities around terminology in multilingual families, including heritage language, home language, minority language, etc., the text explained that each parent should fill in the questionnaire from the perspective of their own language, and their own attitudes,  which may result in more than one questionnaire being submitted from the same family, as each parent explores their attitudes and attachments. Participants were made aware that completion implied their consent for data to be aggregated and analysed for publication.

**Scoring**

Responses to Likert-type items were scored from 1 to 5 where 5 represented the strongest level of agreement or importance. A small number of items were negatively worded to encourage participants to engage fully with the content of each item rather than to respond superficially to the statements presented (Spector, 1992) with negative item loadings arising in the subsequent factor analyses for respective items as expected.

*Limitations*

Beyond the limitations mentioned in the section on generalisability, validity, and reliability, a core limitation lies in the complexity of creating a one-size-fits-all approach for multilingual families. The initial research project (Little, 2020) highlighted the difficulties in seeking to homogenise

incredibly complex language attitudes, embedded in socio-familial and community constructs. At the most basic level, the study asked parents to pick one language and consider this language throughout the questionnaire, when those working in multilingual contexts will understand that bilinguals may well have multiple languages to draw on. No matter which wording is chosen whether the language that parents choose to pass on to their children, or the language they feel most connected to, any choice introduces a necessary bias, that can only be overcome when participants complete the questionnaire several times, each time with different languages in mind. From the data collected, it appears that the 505 responses correspond to 505 individuals, however, participants' underlying thought processes for picking one language over another could not be captured in a purely quantitative study. The fact that the study was in English only presents a further limitation, essentially limiting participation to a purely anglophone audience. Lack of funding to dedicate to translation is a recurring issue (Heywood & Harding, 2021), and one that we hope a future project will be able to address. ==Further, age, education level, profession, and socioeconomic background are not included in the questionnaire, to make it manageable for participants, and to avoid the need for some difficult international comparisons.==

**Data Analysis**

The survey ran for 8 months, and in that time generated 505 viable results, with a further 27 being disregarded for being clear duplications, or clearly automated (bot) entries, the latter of which were identified because they included links to commercial websites, nonsensical comments, etc.

An initial descriptive analysis was conducted to summarise the demographic profile of respondents. Questionnaire data were then inspected for completeness and, aside from a few optional demographic items (e.g. gender), there were no missing data for the full set of 505 participants' Likert-item responses allowing the full dataset to be utilised for exploratory factor analysis (Finch, 2020).

Out of the 505 participants, 431 identified as female, 67 as male, 5 preferred not to disclose a gender, and two left the question blank - offering additional options to this question is a change we would have retrospectively liked to have made, in order to be more inclusive. The gender distribution was somewhat expected, echoing the prevalent amount of research literature highlighting the role of and burden on mothers in passing on the heritage language (Okita, 2002; Torsh, 2020). The discrepancy in numbers makes it difficult to adequately compare male and female responses statistically, and so this paper has focused on the data pool as a whole, without seeking to draw gender-based conclusions.

### Developing the scale

A process of exploratory factor analysis was applied to the dataset, assessing the properties of the Heritage Language Self-Assessment as a psychometric instrument and how it might reflect the four quadrants of Little's Heritage Language Framework (2020). This process meant that assignment of questionnaire items to quadrants was entirely analysis-driven, rather than hypothesised in advance, adding to the rigour of the research. Decision-making throughout the analysis was based on a combination of "reasoned reflection" and technical appraisal of the dataset (Henson & Roberts, 2006, p. 399).

Oblique rotation methods were selected in order to allow extracted factors to correlate with each other to reflect the structure of the theoretical framework, particularly where "essential" and "peripheral" conceptual forms may be related. The use of oblique rotation was confirmed by a preliminary analysis using orthogonal rotation which led to factor correlations above the threshold magnitude of 0.3 suggested by Brown (2009, citing Tabachnick & Fidell, 2007) indicative of the shared variance anticipated between factors.

Principle Axis Factoring was selected as a robust extraction technique where the data are not assumed to have a multivariate normal distribution (Fabrigar et al., 1999) with the use of Promax rotation (Loehlin and Beaujean, 2017; Carpenter, 2018). Analysis began with an assessment of the appropriateness of the dataset for use with factor analytic techniques (Field, 2018). Initial inspection of the correlation matrix provided a multitude of correlations above 0.3, a Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy at 0.838 and a statistically significant Bartlett's test of sphericity ($p < 0.001$), all supportive of continuing the factor analysis (Kaiser, 1974; Carpenter, 2018; Field, 2018).
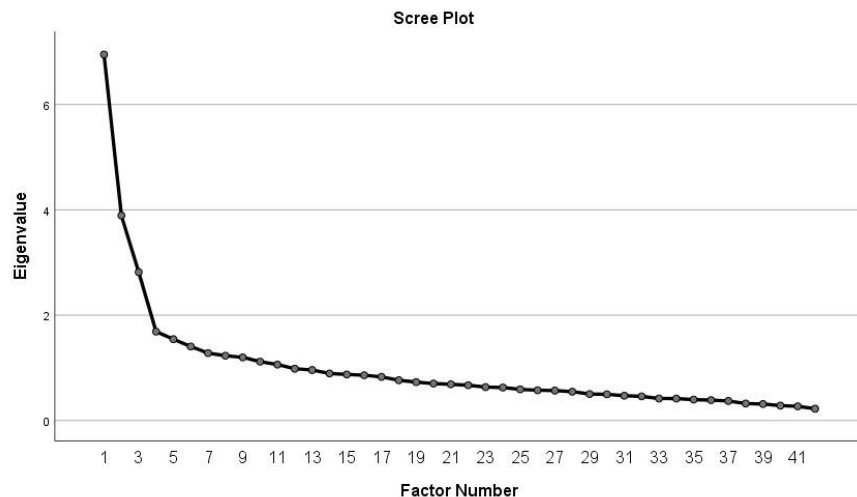


*Figure 1: Scree plot suggesting the extraction of a three-factor model from the data*

Scree plot analysis (Figure 1, above) initially indicated suggesting only extracting three factors

(Field, 2018). However, a four factor extraction was suggested by Velicer's revised Minimum Average Partial (MAP) test (O'Connor, 2000; Velicer et al., 2000) in alignment with the theoretical model. Though a three factor model was explored alongside subsequent stages of analysis (Costello & Osborne, 2005), little consistency was found in the mapping of items and interpretation of the resulting factors and therefore a four factor model was carried forward in alignment with the theoretical model for further consideration, slight over-factoring being argued by Carpenter (2018) as preferable to under-factoring at this stage. The implications of this decision and why the data give rise to such an unclear distinction between the possible number of factors are revisited later.

After an initial run of the factor analysis, the resultant "Pattern Matrix" was examined to identify variables from the initial set of 42 response-items for removal (Field, 2018): non-loading items (all loadings < 0.3) and cross-loading items (loadings > 0.3 on more than one factor) were prioritised for removal, while attempting to ensure at least three variables were retained per factor (Costello & Osborne, 2005; Carpenter, 2018). Variables with communalities below 0.2, where the variance of individual items does not seem to be well explained by the extracted factors, were also removed (Child, 2006), since they indicated redundancy and no longer added anything useful to the prediction of underlying factors. The structure matrix and factor correlation matrix were also considered as an indication of where items seemed to load across multiple, correlated, factors. The resulting pattern matrix solution is provided below (Table 1):

*Table 1: EFA pattern matrix, principle axis factoring with promax rotation*

| Factor | Item | EP | PP | EE | PE | $h_2$ |
|--------|------|----|----|----|----|----|
| Essential Pragmatic | EP7 We have a strong community in the family language around us. | **.765** | -.050 | .010 | .061 | .568 |
| | EP8 In our community, you fit in better when you speak our family language. | **.838** | -.001 | -.057 | -.005 | .680 |
| | EP10 The family language is necessary to be part of our local community. | **.837** | -.077 | .004 | .083 | .667 |
| | EP11 We encounter the family language daily outside our home. | **.621** | .183 | -.113 | -.113 | .462 |
| | EP12 We use our family language to pray/access religious services. | **.517** | -.070 | .081 | -.160 | .311 |
| Peripheral Pragmatic | PP3 Studying/working in the country where our family language is spoken is a future possibility for my children. | -.075 | **.550** | -.096 | .089 | .308 |
| | PP4 My child could get by without knowing the family language. | -.075 | **-.510** | .025 | -.023 | .289 |

| | | | | | |
|---|---|---|---|---|---|
| | PP6 Speaking the family language will enhance future employment prospects. | -.095 | **.836** | -.027 | -.047 | .628 |
| | PP7 Speaking the family language makes travelling easier. | -.089 | **.632** | .015 | .027 | .394 |
| | PP8 Speaking the family language makes life easier for us. | .136 | **.651** | .055 | .001 | .518 |
| | PP12 Knowing the family language helps me access more opportunities. | .031 | **.617** | -.036 | -.043 | .367 |
| Essential Emotional | EE2 I feel guilty when I don't use the heritage language in the family. | -.031 | -.176 | **.605** | .020 | .343 |
| | EE5 I sometimes refuse to answer my child if they don't speak the family language. | -.008 | -.001 | **.510** | -.102 | .232 |
| | EE6 It is a cultural expectation that our children will learn the family language. | .148 | .144 | **.368** | -.011 | .243 |
| | EE9 It is necessary for my children to speak the family language, to support social family cohesion. | .118 | .271 | **.315** | .085 | .310 |
| | EE10 I often worry about my child not being or becoming 'good enough' in the family language. | -.170 | -.028 | **.510** | -.037 | .227 |
| | EE13 The family language is vital for us to connect to our cultural roots. | .153 | .038 | **.395** | .116 | .271 |
| Peripheral Emotional | PE01 I don't particularly mind whether my child learns my language or not. | .160 | -.092 | -.083 | **-.459** | .305 |
| | PE7 When we go on holiday, it's nice for the child to speak the language, so they can find children to play with. | -.075 | .157 | .007 | **.440** | .272 |
| | PE8 It's nice to see my child communicate in the family language (with other family members) when we visit the country. | .066 | -.089 | -.092 | **.844** | .617 |

Further evaluative measures were then considered for this final factor extraction: the KMO measure of sampling adequacy was 0.810, Bartlett's test of sphericity remained significant (p < 0.001). The resulting scree plot is now also supportive of the four factor solution with the reduced item-set:
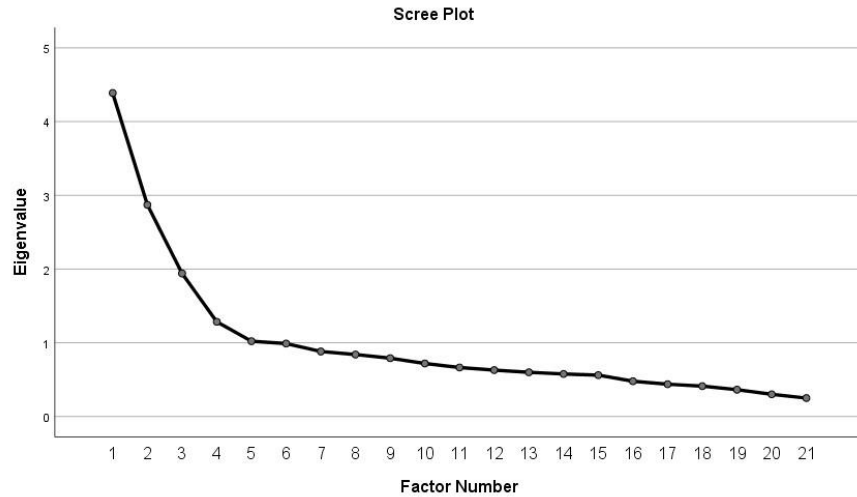
*Figure 2: Scree plot supporting the extraction of a four-factor model from the data*

Examining the factor correlation matrix indicates a small correlation between factors (Field, 2018) PE and EE (r = 0.349), PP and EE (r = 0.353) but less so between other combinations of variables (r between -0.052 and 0. 271). This is to be expected, as allowed by the oblique rotation method, without undermining the overall clarity and usefulness of the four-factor result.

Variables corresponding to negatively-worded survey items were reverse-scored prior to calculation of Cronbach's Alpha (Field, 2018, pp. 823-824) to assess the internal consistency for each of the four resulting sub-scales (Table 2).

*Table 2: Cronbach's Alpha measures for the four sub-scales*

|  | EP | PP | EE | PE |
|---|---|---|---|---|
| Number of items | 5 | 6 | 6 | 3 |
| Cronbach's Alpha | 0.835 | 0.791 | 0.630 | 0.617 |

Though the specific benchmark figures and usefulness of Cronbach's Alpha are contested (e.g. Sijtsma, 2009) these values are deemed acceptable (α > 0.6) in the context of this exploratory study, in light of relatively small number of items remaining for each sub-scale, and with no further test-items being identified for removal from the model as a result (Field, 2018).

**Discussion**

From the exploratory factor analysis, it is clear that all four quadrants had a viable number of statements aligning with them, making the scale a reliable way to invite parents to self-assess their attachments linked to "their" language. What is also clear is that, overarchingly, "essential" criteria are more easily identified than "peripheral" criteria, and "pragmatic" criteria are more easily identified than "emotional" criteria, making the "peripheral emotional" quadrant the most difficult one to reliably assess. This is not surprising, since the idea of "heritage language as socio-emotional convenience" was, in the original study leading to the framework (Little, 2020) often framed as the "it would be nice" stance. Seeing the statement "It's nice to see my child communicate in the family language (with other family members) when we visit the country" being the statistically strongest therefore is not surprising. Potential employability advantages were frequently highlighted as an "additional bonus" of children's heritage language status by their parents in the original study, a finding that is mirrored here by the relevant statement (PP6) representing the strongest statement in the "peripheral pragmatic" quadrant.

Of particular importance in terms of considering support measures for multilingual parents is the essential emotional quadrant. The statements loaded here show a larger number of vocabulary items linked to mental well-being, with the statements referring to "guilt" (EE2), "worry" (EE10) and language refusal (EE5) loading highest. Deliberately refusing to communicate with your child can have a high emotional impact (Little & Little, 2022, Little, 2023). Societal pressures from family members or the local community (EE6) can also have a significant impact on parents' mental health (De Houwer, 2017). For the parents mainly situated in this quadrant, the heritage language and its maintenance has concrete links to mental well-being, although these needs may be overlooked by society, since pragmatic reasons are typically more visible (Little, 2020). While this paper does not specifically focus on how different participant groups score across the different quadrants, this is an important next step, especially bearing in mind the well-documented emotional load carried typically by women (Okita, 2002, Torsh, 2020). The HLI-Q could help identify dangers to mental well-being, thus opening pathways for intervention and support.

In the section on reliability, we stated that one key question was whether the questionnaire would lead to different attitudinal profiles. Typically, participants did not map solely against a single quadrant. This is to be expected, as both emotional and pragmatic attitudes play a role in heritage language maintenance, and just because primary reasons may be "essential", this does not mean that there could be no "peripheral" reasons (Little, 2020). Nevertheless, the profiles created via the questionnaire highlighted tendencies towards certain quadrants, which was precisely the intended outcome. In a tool which is meant to support family communication, a self-assessment questionnaire which helps parents to understand differing and converging

attitudes towards the heritage language are the first step to give parents the vocabulary and understanding to articulate their emotions, attitudes, and needs.

**Conclusion**

The process of reducing the initial 42 statements to 20 via factor analysis gave us the opportunity to understand in depth the attitudes and emotions behind parents' responses. We propose that the HLI-Q has the potential to make a significant contribution to our understanding of multilingual parents, and, by extension, for multilingual parents to understand each other, offering opportunities to reduce intra-relationship tensions when it comes to the heritage language. The questionnaire can form the first step towards targeted support in multilingual families, and as such is a tool that offers potential to the fields of education, psychology, social work, and prenatal care, where parents would have the opportunity to discuss their different attitudes before their parenting journey begins. Making the questionnaire available is thus an important first step to give practitioners the relevant tools to understand and assist multilingual or heritage language families, with real benefits to support received by these service users. The questionnaire can be re-visited periodically to explore changes in attitudes, and can be used, in adaptation, with older children, to contribute their voices to family discussions. We therefore include the original questionnaire as an appendix for transparency, and make the final version available to the research community at http://hliq.group.shef.ac.uk, enabling the set-up of sub-spaces to facilitate further research. Further cross-analysis between the quadrants and the supplementary questions has the potential to highlight whether certain quadrants or attitudes are more prevalent in different populations.

**References**

Baker, C. (2011). *Foundations of Bilingual Education and Bilingualism*. 5th ed. Bristol: Multilingual Matters.

Bailey, E. G., Parrish, A., & Pierce N. J. (2023). 'Having a decent understanding of more than one language': exploring multilingualism with secondary school students in England, *Journal of Multilingual and Multicultural Development*, DOI: 10.1080/01434632.2023.2216679

Boyle, G. J., Saklofske, D. H., & Matthews, G. (2014). Criteria for Selection and Evaluation of Scales and Measures. In Boyle, G. J.; Saklofske, D. H.; and Matthews, G. (Eds.) *Measures of Personality and Social Psychological Constructs (*pp. 3-15). Elsevier Science and Technology.

Boyle, G. J., Hermes, E., Matthews, G., & Izard, C. E. (2014). Measures of Affect Dimensions. In Boyle, G. J.; Saklofske, D. H.; and Matthews, G. (Eds.) *Measures of Personality and Social Psychological Constructs (*pp. 190-226). Elsevier Science and Technology.

Brown, J. D. (2009). Choosing the Right Type of Rotation in PCA and EFA. *Shiken: JALT Testing & Evaluation Newsletter, 13*(3), 20-25. https://hosted.jalt.org/test/PDF/Brown31.pdf

Budiyana, Y. E. (2017). Students' Parents' Attitudes toward Chinese Heritage Language Maintenance. *Theory and Practice in Language Studies, 7*(3), 195-200. http://dx.doi.org/10.17507/tpls.0703.05

Carpenter, S. (2018). Ten Steps in Scale Development and Reporting: A Guide for Researchers. *Communication Methods and Measures, 12*(1), 25–44. https://doi.org/10.1080/19312458.2017.1396583

Child, D. (2006). *The Essentials of Factor Analysis.* (3rd ed). New York: Continuum

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation, 10*(7), 1-9. https://doi.org/10.7275/jyj1-4868

Couper, M. P., Singer, E., Conrad, F. G., & Groves, R. M. (2008). Risk of disclosure, perceptions of risk, and concerns about privacy and confidentiality as factors in survey participation. *Journal of Official Statistics, 24*(2), 1–22.

De Houwer, A. (2020). Harmonious Bilingualism: Well-being for families in bilingual settings. In A.C. Schalley and S. A. Eisenchlas (Eds.) *Handbook of Home Language Maintenance and Development: Social and Affective Factors (*pp. 63-83). Berlin/Boston: De Gruyter.

De Houwer, A. (2017). Minority language parenting in Europe and children's well-being. In N. Cabrera and B. Leyendecker (Eds.), *Handbook on positive development of minority children and youth* (pp. 231-246). Berlin: Springer.

Department for Education (2020). Schools, pupils and their characteristics 2019/20. https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics (accessed 17th November 2022)

Dewaele, J.-M., & Pavlenko, A. (2001-2003). Web questionnaire *Bilingualism and Emotions*. University of London.

Edwards, J. (2009). *Language and Identity.* Cambridge: Cambridge University Press.

Evans, D. (2018). Meaning: From Inner Structure to Post-structure. In D. Evans (Ed) *Language, Identity and Symbolic Culture* (pp. 7-26). London: Bloomsbury.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*(3), 272–299. https://doi.org/10.1037/1082-989X.4.3.272

Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics* (Fifth edition.). Los Angeles: SAGE.

Finch, W. (2020). Exploratory factor analysis. SAGE Publications, Inc., https://dx.doi.org/10.4135/9781544339900

Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and Individual Differences, 7*, 385-406. https://doi.org/10.1016/0191-8869(86)90014-0.

Gharibi K., & Mirvahedi S. H. (2021). 'You are Iranian even if you were born on the moon': Family language policies of the Iranian diaspora in the UK. *Journal of Multilingual and Multicultural Development*. Advance online publication. https://doi.org10.1080/01434632.2021.1935974

Haukås, Å, Storto, A., & Tiurikova, I. (2021). Developing and Validating a Questionnaire on Young Learners' Multilingualism and Multilingual Identity. *The Language Learning Journal*, 49 (4): 404–419. DOI: 10.1080/ 09571736.2021.1915367.

Henson, R. K., & Roberts, J. K. (2006). Use of Exploratory Factor Analysis in Published Research. *Educational and Psychological Measurement, 66*(3), 393–416. https://doi.org/10.1177/0013164405282485

Heywood, E., & Harding, S. A. (2021). "If you've done a good job, it's as if you've never existed": Translators on translation in development projects in the Sahel. *Translation Studies, 14*(1). DOI: 10.1080/14781700.2020.1749122

Hollebeke, I., Dekeyser, G. N. M., Caira, T., Agirdag, O., & Struys, E. (2022). Cherishing the heritage language: Predictors of parental heritage language maintenance efforts. *International Journal of Bilingualism*, *0*(0). https://doi.org/10.1177/13670069221132630

House of Commons Library (2022). Migration Statistics Research Briefing. Available at https://researchbriefings.files.parliament.uk/documents/SN06077/SN06077.pdf (accessed 17th November 2022)

Irving Torsh, H. (2020). *Linguistic Intermarriage in Australia: Between Pride and Shame*. Sydney: Palgrave Pivot.

Ivanova, O. (2019). "My Child Is a Perfect Bilingual": Cognition, Emotions, and Affectivity in Heritage Language Transmission. *Languages (Basel), 4*(2), 1-18. DOI: 10.3390/languages4020044

Jackson, L. (2006). Foreign Fathers – Native English Speaking Fathers' Contributions to Bilingual Child-Rearing in Intermarried Families in Japan. *New voices (Sydney, N.S.W.), 1*, 87-98. DOI: 10.21159/nv.01.09

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31–36. doi:10.1007/BF02291575

Kim, S. H. O., & Starks, D. (2010). The role of fathers in language maintenance and language attrition: the case of Korean-English late bilinguals in New Zealand. *International Journal of Bilingual Education and Bilingualism, 13*(3), 285-301 DOI: 10.1080/13670050903193958

Little, S. (2019). Great Aunt Edna's Vase: Metaphor Use in Working With Heritage Language Families. *The Family Journal*, *27*(2), 150–155. https://doi.org/10.1177/1066480719833417

Little, S. (2020). Whose heritage? What inheritance?: conceptualising family language identities, *International Journal of Bilingual Education and Bilingualism, 23*(2), 198-212, DOI: 10.1080/13670050.2017.1348463

Little, S. (2023). 'Half of who you are': Parent and child reflections on the emotional experiences of reversing familial language shift. *International Journal of Bilingualism, 27*(2), 217-231. https://doi.org/10.1177/13670069221125705

Little, S. (2024). Rivers of multilingual reading: exploring biliteracy experiences among 8-13-year old heritage language readers. *Journal of Multilingual and Multicultural Development*,  *45*(2), 323-336. DOI: 10.1080/01434632.2021.1882472

Little, S., & Little, T. (2022). An un/familiar space: children and parents as collaborators in autoethnographic family research. *Qualitative Research*, *22*(4), 632–648. https://doi.org/10.1177/1468794121999018

Loehlin, J. C., & Beaujean, A. A. (2001). *Latent Variable Models: An introduction to Factor, Path and Structural Equation Analysis* (5th Edition). New York and London: Routledge

Migration Observatory (2022). Children of Migrants in the UK. Available at https://migrationobservatory.ox.ac.uk/wp-content/uploads/2020/08/MigObs-Briefing-Children-ofmigrants-in-the-UK.pdf (accessed 17th November 2022)

Müller, L.-M., Howard, K., Wilson, E., Gibson, J., & Katsos, N. (2020). Bilingualism in the family and child well-being: A scoping review. *The International Journal of Bilingualism, 24*(5-6), 1049-1070. DOI: 10.1177/1367006920920939

O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instrumentation, and Computers, 32*, 396-402.

Okita, T. (2002). *Invisible Work: Bilingualism, Language Choice, and Childrearing in Intermarried Families.* Amsterdam: John Benjamins.

Panicacci, A., & Dewaele, J.-M. (2017). 'A voice from elsewhere': acculturation, personality and migrants' self-perceptions across languages and cultures. *International Journal of Multilingualism, 14*(4), 419-436, DOI: 10.1080/14790718.2016.1273937

Patalay, P., & Fitzsimmons, E. (2016). Correlates of mental illness and wellbeing in children: Are they the same? Results from the UK millennium cohort study. J*ournal of the American Academy of Child and Adolescent Psychiatry, 55*(9), 771-783. https://doi.org/10.1016/j.jaac.2016.05.19

Sevinç, Y. (2020). Anxiety as a negative emotion in home language maintenance and development. In A.C. Schalley and S. A. Eisenchlas (Eds.) *Handbook of Home Language Maintenance and Development: Social and Affective Factors* (pp. 84-105). Berlin/Boston: De Gruyter.

Sijtsma, K. (2009). On the Use, the Misuse, and the Very Limited Usefulness of Cronbach's Alpha. *Psychometrika 74*(107). https://doi.org/10.1007/s11336-008-9101-0

Smith-Christmas, C. (2020). Child agency and home language maintenance. In A.C. Schalley and S. A. Eisenchlas (Eds.) *Handbook of Home Language Maintenance and Development: Social and Affective Factors* (pp. 218-235). Berlin/Boston: De Gruyter.

Spector, P. E. (1992). Summated Rating Scale Construction. London: SAGE Publications, Inc.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Upper Saddle River, NJ: Pearson Allyn & Bacon.

Van Oudenhoven, J. P., & Van der Zee, K. I. (2002). Predicting multicultural effectiveness of international students: the Multicultural Personality Questionnaire. *International Journal of Intercultural Relations, 26*(6), 679-694.

Velicer, W. F., Eaton, C. A., & Fava, J. L. (2000). Construct explication through factor or component analysis: A review and evaluation of alternative procedures for determining the number of factors or components. In R. D. Goffin and E. Helmes (Eds.) *Problems and solutions in human assessment* (pp. 41-71). Boston: Kluwer.

Wang, Y. (2023). Speaking Chinese or no breakfast: Emotional challenges and experiences confronting Chinese immigrant families in heritage language maintenance. *International Journal of Bilingualism*, *27*(2), 232-250. https://doi.org/10.1177/13670069221126043

Xiao, Y., & Wong, K. F. (2014). Exploring Heritage Language Anxiety: A Study of Chinese Heritage Language Learners. *The Modern Language Journal, 98*(2), 589-611.

Appendix 1 - Original Heritage Language Identity Questionnaire (HLI-Q) statements

1. I enjoy reading books or watching TV/films in my family language in my own time.
2. Knowing the family language helps me access more opportunities.
3. I could get by without knowing the family language.
4. I think my partner does not understand how important my language is to me.
5. I feel guilty when I don't use the heritage language in the family.
6. I enjoy speaking in my family language.
7. My language is important as an inseparable part of me.
8. My family language is necessary for me to work/go to school.
9. I don't particularly mind whether my child learns my language or not.
10. When we go on holiday,  it's nice for the child to speak the language, so they can find children to play with.
11. It's nice to see my child communicate in the family language (with other family members) when we visit the country.
12. If my child is happy without the family language, that is okay with me.
13. Studying/working in the country where our family language is spoken is a future possibility for my children.
14. My child could get by without knowing the family language.
15. My child has formal instruction in the family language (eg. Saturday school, etc.).
16. I sometimes refuse to answer my child if they don't speak the family language.
17. My child sometimes translates for me (from family language to society language).
18. It is a cultural expectation that our children will learn the family language.
19. In future, my child will be expected to marry/choose a partner from our language background.
20. I cannot imagine my child not speaking my language.
21. I feel an emotional responsibility to pass on my language to my children.
22. It is necessary for my children to speak the family language, to support social family cohesion.
23. I often worry about my child not being or becoming 'good enough' in the family language.
24. I don't mind if my child does not answer me in my language.
25. When we travel to the country where our family language is spoken, we have many friends and family members to connect with.
26. Having another language is like a 'free gift' - you might as well make use of the opportunity to learn it.
27. Speaking the family language will enhance future employment prospects.
28. Speaking the family language makes travelling easier.
29. Speaking the family language makes life easier for us.
30. Me and my partner argue about how/which languages should be used in our family.
31. The family language is vital for us to connect to our cultural roots.

32. We are planning to return (to live) to a country where the family language is spoken.
33. As a family, we regularly use online technology to communicate in the family language with other family members.
34. We have family members living with us/near us who do not speak the society language well enough to communicate freely.
35. Shared reading in the family language is/was important in family time.
36. Knowing the family language helps making friends.
37. We have a strong community in the family language around us.
38. In our community, you fit in better when you speak our family language.
39. My child's school/nursery/kindergarten engage with my child's multilingual background.
40. The family language is necessary to be part of our local community.
41. We encounter the family language daily outside our home.
42. We use our family language to pray/access religious services.