

4 Mapping Teacher Beliefs and Practices About Multilingualism: The Development of the MultiBAP Questionnaire

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Introduction and Aims

While language-diverse English classrooms are under-researched in Sweden (Källkvist *et al.*, 2017), teachers are gaining firsthand experience through teaching language-diverse student groups, thus gaining experience and knowledge that warrants documentation. Such knowledge is often conceptualized as beliefs and practices (Borg, 2006), and a suitable instrument for mapping that knowledge among large numbers of teachers quickly is the questionnaire (Dörnyei & Taguchi, 2010; Phakiti, 2015). Questionnaires, like any other instruments, must be capable of yielding reliable data through which valid inferences can be drawn, and scholars have recently called for increased methodological and statistical awareness in Applied Linguistics and Second Language Acquisition (SLA) (Norris *et al.*, 2015; Plonsky, 2015), where the use of questionnaires is widespread (Dörnyei & Taguchi, 2010; Phakiti, 2015). In a similar vein, as pointed out by Borg (2015: 494; our emphasis), in many self-report instruments, there is room for quality enhancement, and ‘a first requirement for researchers wanting to use questionnaires [...] to study teachers’ beliefs is to ensure they understand – theoretically and in practice – *how to design a robust instrument*’. Similarly, Gu (2016) and Valeo and Spada (2016) have called for more attention to how questionnaires are designed, analyzed and validated. Careful reporting of procedures and instruments used also make replication studies possible (Mackey, 2012; Marsden *et al.*, 2018).

Following in the wake of increased mobility, language teachers are experiencing a shift towards greater linguistic diversity in additional language (L2) classrooms (Busse *et al.*, 2020). At the same time, while there is extensive research on teacher beliefs about L2 teaching/learning in general (see, e.g. Borg, 2006, 2015; Pajares, 1992), there is little research on teacher beliefs specifically about the role of multilingualism in L2 classroom contexts (though see Lundberg, 2019). Prior research reveals that the classroom is ‘a key site where policies become action’ where teachers exercise agency (Hult, 2014: 159; see also Borg, 2006).

In response to the above calls, this chapter provides a detailed description of the methodology behind the development of a new questionnaire instrument called MultiBAP (Multilingualism: Teacher Beliefs And Practices). As part of the school-based research project MultiLingual Spaces (see Källkvist *et al.*, 2017) – in which *multilinguals* are defined as learners of English who use Swedish and one or several additional languages (e.g. Arabic, Finnish or Somali) in their everyday life – MultiBAP was designed to map L2 English teachers’ *beliefs* about multilingualism in individuals, in classrooms and schools and in Swedish society at large, and practices in their classrooms and schools. Pajares (1992: 316) suggests *teacher beliefs* be defined as ‘an individual’s judgment of the truth or falsity of a proposition’ and are constructed in everyday practice (van Lier, 2006). Thus, it is relevant to map teacher practices while examining their beliefs, even though beliefs are not always mirrored in their practices (Borg, 2015).

Consequently, the present chapter aims to contribute to developing questionnaire research methodology in L2 language education. In pursuing this aim, we:

- (1) describe the development of the instrument MultiBAP,
- (2) critically evaluate each step of the development process and
- (3) provide a step-wise validation of MultiBAP.

In what follows, we focus on methodological aspects of questionnaire development and then provide an account of the construction and validation of MultiBAP. We end by discussing possible uses of MultiBAP, including the need for further development and validation.

Questionnaires in Research on Beliefs and Practices – Methodological Considerations

Questionnaires have been used extensively in SLA research (e.g. Winke, 2011) and in research on teacher beliefs, although not as frequently. In Borg’s (2015) account of 20 studies of L2 teachers’ beliefs, half were qualitative, 7 were mixed-method and 3 were quantitative. Of these, 16 investigated the beliefs of in-service teachers. Nine had sample sizes of

fewer than 10 participants; three had 11–50 participants; four were composed of 51–100 participants and four > consisted of 100 participants.

Kern (1995), Levine (2003), De Angelis (2011) and Bailey and Marsden (2017) are examples of studies that focus on teacher beliefs, including topics such as comparisons between learner and teacher beliefs, beliefs about target and first language (L1) use and beliefs about anxiety and the role of prior knowledge in learning. Generally speaking, in such studies, validation procedures used are rarely addressed. Furthermore, with relevance to the current study, Norris *et al.* (2015: 472) stress the importance of providing evidence regarding both the consistency of the measurement instruments used and the validity of ‘the intended construct interpretations being made in the actual study with the actual population sample’.

Studies discussing reliability and validity in more depth include Graus and Coppens (2016), Loewen *et al.* (2009), Lee and Oxelson (2006), Spada *et al.* (2009) and Winke (2011). Graus and Coppens (2016) investigated the beliefs of student teachers of English as a foreign language ($N = 832$) about grammar teaching. A questionnaire consisting of three parts was developed and validated, and following piloting and revisions, 24 five-point Likert-scale items were retained. Reliability values (Cronbach’s alpha) between 0.735 and 0.864 were observed, and items had moderate to large loadings on their respective factors.

Loewen *et al.* (2009) studied learner beliefs about the role of grammar instruction and error correction. University students ($N = 754$) responded to a questionnaire containing 37 Likert-scale items (information about the range of the scale is missing) and 4 prompts (open-ended). The quantitative data were submitted to an Exploratory Factor Analysis (EFA) and ‘[f]actor loadings of .30 or greater on the obliquely rotated factor matrix were considered significant’ (2009: 95), identifying six underlying factors, with a Cronbach’s alpha of 0.84 for the questionnaire overall. No reliability values for the subscales are given.

Lee and Oxelson (2006) studied teachers ($N = 67$) responding to 35 questions about their students’ heritage language maintenance, 11 about practices and 7 about demographics (plus 3 open-ended questions). A seven-point Likert scale was used. In total, 290 questionnaires were distributed. A rather low return rate (29%) was expected due to timing and an assumed lack of interest in the topic (heritage languages). The questionnaire had eight constructs of which reliability values were satisfactory for six (Cronbach’s alpha ranged from 0.76 to 0.85), but low for two (0.51 and 0.53). The researchers used a Varimax principal component factor analysis and report eight underlying factors, highlighting the highest factor loading for each item. Items with a factor loading below 0.40 were excluded from the analysis. There is no further comment on the validity and reliability of the instrument.

Spada *et al.* (2009) centered on developing and validating an instrument for measuring L2 learner preferences for two types of form-focused instruction, ‘isolated’ or ‘integrated’, including 294 respondents. Three kinds of validity evidence were gathered: content, reliability and construct. Regarding content validity, 12 expert judges were asked to assess whether items should belong to the ‘isolated’ or ‘integrated’ scale. Only items for which there was 70% agreement or higher were kept. To calculate internal consistency reliability, Cronbach’s alpha was used, and for construct validity, principal component analysis (PCA) was used. The authors initially created 44 items (5-graded Likert scale), but after several rounds of vetting, the instrument adopted included 20 for practicality reasons. Cronbach’s alpha value for 10 items was 0.63 and for the other 10 items was 0.69. With regard to the PCA used for construct validity, 14 items with loadings of 0.30 or above were retained (two subscales, seven items per subscale). These explained 43.35% of the item variance, and the Eigenvalue for the ‘integrated’ component was 3.77 and for the ‘isolated’ was 2.30. Even though there were only seven items in each subscale, reliability values around 0.7 were claimed to be ‘respectable [...] for a new questionnaire with a small number of items’ (Spada *et al.*, 2009: 78).

Winke (2011) included 267 respondents answering a questionnaire about the validity of the English Language Proficiency Assessment (ELPA) test. The questionnaire included three parts corresponding to the social, ethical and consequential dimensions of ELPA test. It had 40 belief statements, asking respondents to mark their answer on a 10-graded Likert scale. Based on the reported figures about the distribution of the questionnaire (Winke, 2011: 637), the response rate appears to have been 15.1% (an initial 2508 questionnaires, minus 585 that bounced back and 156 non-respondents). Internal consistency was 0.94 (Cronbach’s alpha) overall based on 134 respondents (due to missing data) and 0.95 when missing values were replaced by the series mean. An EFA resulted in a five-factor solution, explaining 72% of the variance. The Eigenvalues ranged from 1.18 to 11.43. Regarding factor loadings, items with loadings of 0.5 or above were kept.

In sum, it seems that dominating reliability/validity analyses comprise the use of item analysis (item-total correlation, internal consistency reliability and internal vetting), expert judgments (content validity) and various types of factor analysis (underlying constructs). One observation relates to the type of EFA used. Specifically, the use of PCA over a common factor EFA model (e.g. Lee & Oxelson, 2006; Spada *et al.*, 2009) has been questioned (see the section *Item analysis and factor analysis* (p. 66) on the appropriateness of using PCA). Finally, details from piloting rounds are seldom reported, and the response rates are either not reported at all or vary in the way they are reported. In developing MultiBAP, we included item analysis, expert judgments, and an EFA.

Construction and Validation of the MultiBAP Questionnaire

On reviewing prior questionnaire research, it was clear that no extant instrument would capture the type of questions we intended to address. Therefore, we constructed and validated MultiBAP with the purpose of yielding generalizable, quantitative data. The target statistical population was secondary school (Grades 6–9) L2 English teachers in Sweden. A questionnaire cannot possibly cover everything in broad fields, but it may examine some aspects of the fields well, namely the targeted constructs (see below).

The process of creating MultiBAP breaks down into five carefully planned phases, outlined in Table 4.1, in line with important methodological considerations addressed by Wagner (2015). In Phase I, we decided on the parts to be included. In Phase II, we identified the constructs that the instrument was intended to tap into and generated a pool of items for each construct, which was then vetted in the research group. Finally, we asked two raters to link items to the constructs, which led to the final content of the PILOT Questionnaire. Phase III consisted of piloting MultiBAP using a sample of teachers from the same population as the one intended for the FINAL Questionnaire. Based on these data, we analyzed the feedback solicited from the respondents, carried out item analysis and created a Draft FINAL Questionnaire, which an external expert (specialized in multilingualism, L2 learning and translanguaging) was

Table 4.1 Phases and steps in the questionnaire construction and validation

Phase	Steps
Phase I	Deciding on questionnaire parts
Phase II	Theory-driven content specification (constructs) Item generation (multi-item scales) Internal vetting of items in the research group Decision on final content and design of PILOT Questionnaire Building of online version of the PILOT Questionnaire
Phase III	Administration of PILOT Questionnaire Analysis of teacher feedback on PILOT Questionnaire Validation: Item analysis Validation: Use of two raters – relating items to constructs Validation: Feedback from external expert Decision on content and design of FINAL Questionnaire Building of online version of FINAL Questionnaire
Phase IV	Administration of FINAL Questionnaire Item analysis and EFA of FINAL Questionnaire
Phase V	Content and design of MultiBAP Questionnaire

asked to critique. Following feedback, we decided on the content of the FINAL Questionnaire. In Phase IV, we administered the FINAL Questionnaire, followed by item analysis, an EFA and a reliability analysis. Finally, in Phase V, we decided on the design and content of the MultiBAP Questionnaire.

Phase I: Outlining the questionnaire instrument

Based on best practice for questionnaire design (Dörnyei & Taguchi, 2010; Wagner, 2015), MultiBAP was designed to capture data on beliefs, practices and background information, such as years of teaching experience. Beliefs are essential as they are known to underpin practices (Borg, 2006) of how to teach multilingual groups of students. Such contexts provide opportunities to use pedagogical translanguaging involving teachers' and students' background languages, defined as languages learned prior to classroom exposure to English (Bardel *et al.*, 2013). Demographic background data were deemed important to enable correlation analyses, for example, correlating teachers' experience with their self-reported beliefs and practices.

We used closed-ended items combined with a small number of open-ended items, thereby adopting so-called intramethod mixing (Johnson & Christensen, 2017). For closed-ended items, we used Likert scales with six steps, ranging from 'I fully disagree' to 'I fully agree'. Opinions vary as to whether scales should have an even or odd number of steps; we base our decision on the potential problem of having respondents overusing a middle category (Dörnyei & Taguchi, 2010). Leung (2011) found no clear negative effects of the use of even-numbered scales compared to odd-numbered scales, and by having a six-step scale, we forced respondents to place themselves either to the left or the right of the middle. In Part B, a seventh 'not relevant/don't know' option was included *but separated from the scale*, a procedure in line with Spratt (1999) and recommended by Broca (2015).

Regarding other design aspects, we considered the time needed by respondents to fill in the questionnaire. Dörnyei and Taguchi (2010) suggest that no questionnaire should take more than 30 minutes; knowing of teachers' heavy workload and valuing the need for as high a response rate as possible, our target was 20 minutes. Other considerations concerned starting from a theory-driven list of constructs/concepts/subjects/topics, creating a logical structure, using multi-item scales for constructs and using both positively and negatively worded items.

Phase II: Identifying the constructs and generating questionnaire items

Dörnyei and Taguchi (2010) recommend starting building a questionnaire by identifying critical concepts. This part of our work was guided both by

a research problem formulation in the parent study, MultiLingual Spaces, broadly relating to how teachers and students use their linguistic repertoires to facilitate the learning of English, and by research on multilingualism. We now turn to the six constructs that emerged as relevant.

The constructs

The first construct, *Openness towards other cultures*, has bearings on inclusiveness and attitudes towards other cultures other than one's own. Inclusive practices have been identified as fundamental to education (OECD, 2012) and entail using means to meet the range of natural variation among students in a classroom (Swedish National Agency for Education, 2013). In present-day Sweden, this variation in the range of background languages in the same classroom may include, for example, Arabic, Bosnian, Dari, Farsi, Persian, Polish, Serbian, Swedish and Vietnamese (Gunnarsson *et al.*, 2015). Lindberg and Hyltenstam (2013) argue that a resource attitude to diversity and collectively striving for utilizing all students' varied experiences 'is a prerequisite for successfully teaching students with different linguistic and cultural backgrounds than the homogeneous Swedish one' (Lindberg & Hyltenstam, 2013: 126, our translation). Similarly, Edstrom (2006) argues that acknowledging students' L1(s) is teachers' moral obligation; students are then recognized as individuals and treated with respect. On this research background, we generated items aimed at tapping into teachers' attitudes to, *inter alia*, people from other cultures, having contact with them, visiting foreign countries, respecting people with views other than one's own and adapting to other people's habits and needs. This construct was targeted by 10 items in the pilot version (Appendix 1).

The second construct is *Multilingualism in general*, formed against the backdrop of multilingualism being the norm worldwide (Grosjean, 2008). Items were generated asking, for example, whether multilingualism is something positive, whether it is important to be multilingual in today's world and whether multilingual individuals are more likely to succeed in the future. Like the first construct, 10 items target this construct in the pilot version (Appendix 1).

The third construct centers on the current language situation in Sweden, which is characterized as rapidly growing in multilingualism due to refugee migration. Multilingualism researchers Lindberg and Hyltenstam (2013: 122, our translation) suggest that multilingualism be viewed as an asset, whereas in practice, they claim multilingualism involving migrant, minority languages to be commonly 'connected with problems and deficiencies' (our translation).

The fourth (4) and fifth (5) constructs tap into beliefs and practices to do with the use of background languages in learning an additional language. Specifically, whereas Construct 4 deals with learning any

additional language, Construct 5 targets English in particular. As to practices, research shows that bi- and multilingualism have a positive effect on the acquisition of additional languages (Cenoz & Genesee, 1998); there is strong evidence that bi-/multilingual users cannot completely deactivate their prior languages when processing information in a target language (see Källkvist *et al.*, 2017). Further, the L1 has been shown to be an effective way ‘of communicating meaning’ (Nation, 2003: 5).

In terms of beliefs, teachers typically harbor positive beliefs about multilingualism. Research has shown that most teachers are hesitant towards allowing languages that are not known by them in the classroom (De Angelis, 2011; Heyder & Schädlich, 2014). For the beliefs part of MultiBAP, we generated items targeting whether drawing on background languages is good or bad, whether just in general or specifically in the classroom and whether additive multilingualism exists and whether specific language skills (speaking/reading/listening/writing/vocabulary/grammar) may benefit from involvement of background languages. Eleven and 19 items were created for Constructs 4 and 5, respectively, for the pilot version (Appendix 1).

Finally, the sixth construct has to do with monolingual beliefs. Here, it was possible to draw on an existing questionnaire (Pulinx *et al.*, 2015), which focuses on Flanders, Belgium, a region where educational policies are predominantly based on a monolingual ideology. We saw an opportunity of replicating part of Pulinx *et al.* by gathering data from Sweden, where there has been some policy support for multilingualism in that mother-tongue tuition has been offered since 1977. We saw this also as a way of anchoring MultiBAP in an already existing questionnaire.

From constructs to item generation

Our initial goal was for items in Part A (beliefs) to mirror items in Part B (practices). However, it soon became clear that this would only be meaningful for Constructs 1, 2, 5 and 6. Thus, Constructs 3 (the language situation in Sweden) and 4 (using background languages to facilitate learning of an additional language) are included in Part A only.

Next, items were generated aiming to come up with multi-item scales for each construct, that is, ‘a cluster of differently worded items that focus on the same target’ (Dörnyei & Taguchi, 2010: 24) with no less than 3–4 items be used for each construct. We thus developed 7–10 items for each construct (pilot version) allowing us to, at a later stage, select 3–4 items (final version). Once items had been created, an internal vetting process was carried out, resulting in our PILOT Questionnaire (for all items, see Appendix 1), comprising 64 items in Part A, 40 items in Part B, 19 questions in Part C and 9 questions in Part D. The final step in Phase II was to build an online version of the PILOT using the software Survey&Report (Artologik, n.d.).

Phase III: Administering and evaluating the PILOT Questionnaire

Administration

Prior to its distribution, the PILOT Questionnaire went through ‘technical piloting’ among colleagues in order to ascertain that it functioned well regardless of the device used when responding. For distributing the PILOT Questionnaire, 45 English teachers from our professional networks were approached, asking them to respond to the extensive pilot version. In total, 23 teachers replied (response rate: 51%). The data collected were exported into statistical software for the analytical work (IBM SPSS 25).

Analysis of teacher feedback in the PILOT Questionnaire

Part D included evaluative questions, including specific questions about each of the six constructs, to find out to what extent the respondents thought they had answered questions about these. The means for the six constructs ranged from 4.39 ($SD = 1.78$) for Construct 3 (*The current language situation in Sweden*) to 5.91 ($SD = 0.29$) for Construct 4 (*Use of background languages when learning an additional language*). In short, the responding teachers stated that they had answered questions about all six constructs. The greatest spread in answers was found for Construct 3 (the language situation in Sweden), with answers scattered across the whole scale. Thus, items in Construct 3 were less salient to the respondents than items belonging to the other constructs.

As expected, the PILOT Questionnaire took a long time to answer, ranging from 15 minutes to more than 40. Thus, several items were deleted when creating the final version.

Item analysis

Item analysis was important and entailed analyzing the items in relation to the assumed multi-item scales. Corrected item-total correlations and reliability coefficients were computed in SPSS. The items were then perused in a step-wise process as to their fit into the multi-item scale. The goal was to reach as high a reliability as possible with a scale consisting of 3–5 items. As an example, the items aimed at targeting Construct 3 (*The current language situation in Sweden*) are provided in Table 4.2. The initial scale consisted of six items, and the reliability was 0.574, which is on the low side. The removal of Item A3.2 (see Table 4.2) increased the reliability to 0.735, and reliability was observed at 0.822 through the removal of Item A3.4. As can be seen in Step 3, an even higher reliability could be reached by deleting Item A3.1, but this was felt to have a detrimental effect on the dimension targeted in the construct, as well as bringing the number of items down to three. Therefore, no further deletions were made. The same procedure was subsequently used for all the other scales. The resulting list of items is attached in Appendix 1.

Table 4.2 Cronbach's alpha for items in Construct 3

Item	Cronbach's alpha if item deleted		
	Step 1	Step 2	Step 3
A3.1. In Sweden, it is important that students with another home language than Swedish to keep this language alive	0.547	0.719	0.900
A3.2. In Sweden, in addition to Swedish, it is more important to know English than any other language	0.735	DELETED	DELETED
A3.3. In Sweden, your chances of getting a job increase if you are multilingual	0.405	0.602	0.710
A3.4. I think that the status of the Swedish language is threatened by other languages	0.636	0.822	DELETED
A3.5. If you learn English well, your chances of getting a job in Sweden increase	0.403	0.659	0.776
A3.6. If you learn several languages, your chances of getting a good job in Sweden increase	0.352	0.579	0.690
Total Cronbach's alpha	0.574	0.735	0.822

Validation: External raters relating items to constructs

To investigate content validity, data were collected from two external raters. Rater 1 was a senior Humanities researcher, and Rater 2 was a junior scholar in the field of English Linguistics, with expertise in statistics. The raters were presented with all the items in the PILOT Questionnaire, alongside the six constructs, and were asked to categorize each item into these constructs. The external ratings were then compared to that of the research group. According to Altman (1991), pair-wise correlations between 0.60 and 0.80 are considered 'good'. Here, all pair-wise correlations fell within this range (Rater1×ResearchGroup: $r_s = 0.655$; $p < 0.001$; $N = 98$; Rater2×ResearchGroup: $r_s = 0.778$; $p < 0.001$; $N = 102$ and Rater1×Rater2: $r_s = 0.716$; $p < 0.001$; $N = 98$). Using Krippendorff's alpha (Hayes & Krippendorff, 2007), inter-rater reliability for the three ratings reached 0.72, a modest but acceptable result, which was considered satisfactory.

External expert

Another strategy to enhance content validity involved asking a linguist, external to the research group, with expertise in multilingualism to assess the quality of the questionnaire ('external audit', Johnson & Christensen, 2017: 299), leading to further changes. For instance, we streamlined terminology and specified definitions (*multilingualism*, *background languages*).

Content and design of FINAL Questionnaire

Based on the above analyses and steps, the FINAL Questionnaire consists of 39 items in Part A (64 in PILOT), 38 items in Part B (40 in PILOT) and

19 questions in Part C (19 in PILOT). The FINAL Questionnaire was built in Survey&Report (Artologik, n.d.).

Phase IV: Administering and evaluating the FINAL Questionnaire

Administration

A stratified random sample of L2 English teachers was drawn using statistics from Statistics Sweden coupled with school data from the National Agency for Education. This resulted in the questionnaire being distributed to 441 teachers. It remained open for four weeks, with reminders issued at the end of the first and second weeks. A few automated responses were received from teachers on leave; teachers could also opt out of responding. This lowered the number of respondents to 321. When the questionnaire closed, 139 (43%) teachers had responded, which is a respectable number compared with other studies (e.g. Granfeldt *et al.*, 2019, 35%; Henry *et al.*, 2018, 44%) and higher than rates reported in the studies reviewed above. The sample consisted of 103 women (74.1%), 32 men (23%) and 4 individuals who preferred not to state their gender (2.9%). In sum, it was reasonable to consider the random sample representative of the statistical population (see Appendix 2).

Item analysis and factor analysis

Like the PILOT data, items in the FINAL Questionnaire were subjected to item analysis. As a first step, the scoring of items with a reversed phrasing was corrected as such items, if uncorrected, are known to affect reliability (Field, 2013). Next, a reliability coefficient (Cronbach's alpha) for all the 76 items (Parts A and B) was computed and observed at 0.88. The reliability statistics of the 10 multi-item scales are provided in Table 4.3.

As can be seen, most reliabilities were acceptable, with many values close to or well above 0.7. However, scales for B1 (*Openness towards other cultures*) and B2 (*Multilingualism in general*) were clearly below levels aspired to. A reasonable explanation is that teachers' classroom practices do not necessarily mirror school practices. For MultiBAP, we include items from B5 (*Use of background languages in learning and using English*) and B6 (*Monolingual beliefs in education*), because these scales were reliable.

Table 4.3 Cronbach's alpha reliability for multi-item scales in the FINAL Questionnaire

	Multi-item scales									
	A1	A2	A3	A4	A5	A6	B1	B2	B5	B6
Alpha	0.68	0.58	0.71	0.60	0.88	0.72	0.30	0.46	0.86	0.71

Even though MultiBAP was based on six assumed constructs, we could not be sure whether the items technically mapped onto the constructs. One reason was that most items used had not previously been part of a questionnaire. Therefore, we carried out an EFA rather than a confirmatory factor analysis (CFA).

Factor analysis (FA) comprises ‘an array of multivariate statistical methods used to investigate the underlying correlations among a set of observed variables’ (Loewen & Gonulal, 2015: 182) and can be divided into EFA and CFA. As we could not ascertain the number and nature of underlying factors, an EFA rather than a CFA was used. Furthermore, EFA can be divided into EFA and PCA. Conceptually, the difference between PCA and EFA has to do with how the models treat variance; PCA analyzes variance, whereas EFA analyzes covariance. In other words, PCA does not differentiate between variance that is shared versus unique among variables, but EFA does. In many cases, PCA and EFA results are very similar, but not always. Conway and Huffcutt (2003) advise that researchers whose purpose it is to understand the underlying structure of a set of variables should decide on a common factor model (EFA) such as principal axis or maximum likelihood factoring, whereas purposes of pure reduction of variables calls for PCA. We therefore opted for an EFA common factor model.

In preparation for running the EFA, we concluded that many Part B items involve reported practice in the respondents’ classrooms, but also practices at their schools, and beliefs presumably held by principals. Responses to such disparate items may not necessarily correlate. For this reason, we carried out the EFA only on Part A items.

First, it was necessary to investigate the factorability of the data. A wide range of scholarly advice is given in this regard. In the case of sample size, Loewen and Gonulal (2015) conclude that suggestions for minimum absolute sample sizes vary between 100 and 500. An alternative is to consider the number of respondents per item, where recommendations also vary. Based on their review of the literature, Loewen and Gonulal (2015) report on a range between 3 and 20, and Field (2013) report on a range between 10 and 15. In MultiBAP, Part A (beliefs) included 3.66 respondents per item, thus somewhat low. However, not only absolute sample size matters, and when in doubt, a number of statistical tests should be run. Therefore, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was used. KMO values range from 0 to 1; the higher the value, the better sampling adequacy. Our value was 0.78, which is considered ‘good’, bordering on ‘great’ (Loewen & Gonulal, 2015: 187). Furthermore, to test for undesirably low correlations overall, a Bartlett’s test was used. The result was significant, with $\chi^2(703) = 2807.346$, $p < 0.001$, meaning that the variables were sufficiently correlated and suitable for EFA. A related problem involves variables being too highly correlated (multicollinearity), with coefficients of around ± 0.90 . Only one case of such high

correlation was found (Q8 and Q9). Removing one of them did not improve the determinant, but this single case was deemed unproblematic in the light of the high number of items.

As FA seeks to determine ‘the fewest number of variables that will still explain a substantial amount of variance in the data’ (Loewen & Gonulal, 2015: 182), we employed several criteria to arrive at a decision that would chime well with that aim. One is based on a minimum Eigenvalue cutoff level. According to Kaiser’s method, factors with Eigenvalues greater than 1 are retained; Appendix 4 shows that this would leave us with 11 factors. An 11-factor solution was deemed excessive, however, as we observed 1-item factors and factors in which the items were very disparate. Notably, the use of a Eigenvalue >1 in FA is referred to as ‘inappropriate’ by Pedhazur and Schmelkin (1991: 594), and Field (2013) argues that Kaiser’s criterion works well with fewer than 30 items and sample sizes over 250. Another similar method is called Joliffe’s criterion, by which factors with Eigenvalues greater than 0.7 would be retained. This would mean keeping even more factors (15); working with these many factors was not deemed feasible. We subsequently tried several analyses with 9, 8 and 7 factors. However, it was still difficult to arrive at satisfactory solutions. An important aspect for deciding on factors to retain is cumulative percentage of variance (CPoV). Plonsky and Gonulal (2015) report that the average CPoV in L2 research is approximately 60%, while Field (2013) suggests a minimum of 55–65%.

Adhering to these guidelines, with a cumulative percentage of 55.11%, six factors can be retained. Next, we checked communalities (b^2) as these can provide an indication of the relationship of each variable to the entire dataset. High communalities are desired, and the mean value for our 38 items after extraction was 0.47 ($SD = 0.21$). A final potential criterion is a scree plot, where the point of inflexion indicates the cutoff point for selecting factors (Figure 4.1). Scree plots are notoriously difficult to interpret and should only be used in light of other selection criteria (Loewen & Gonulal, 2015). In our case, there were many potential cutoff points, and in our interpretation, the plot did not yield a clear picture.

Through a concerted approach, then, drawing on Kaiser’s test, Bartlett’s test, CPoV and a scree plot, we ultimately decided to retain six factors. This yielded a respectable CPoV of 55% (in line with Field, 2013). As the extraction method, we used maximum likelihood factoring for the analysis of the 38 items in Part A (beliefs). We used oblique rotation, as high correlations were expected for our data (see Loewen & Gonulal, 2015: 197). The rotated factor loadings for the six factors are provided in the form of a pattern matrix in Appendix 3. This type of factor loading matrix is often considered more meaningful and interpretable. As suggested in Loewen and Gonulal (2015), all loadings of < 0.30 have been suppressed. As seen in the matrix, there were deviations from the intended subscales for the 38 items in the sense that the items did not always load

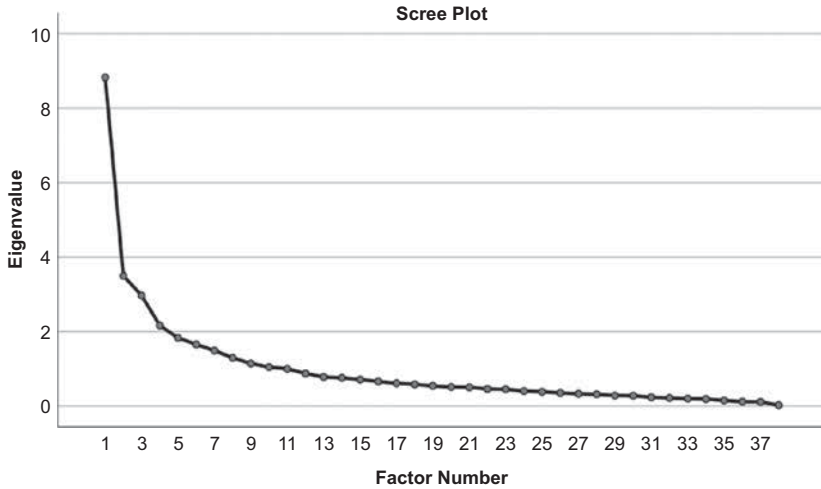


Figure 4.1 Scree plot of components and their associated Eigenvalues

on our six hypothesized constructs. The question code in the left-most column reveals the deviations (items starting with number 1 = *Construct 1*, items starting with number 2 = *Construct 2*, etc.).

As argued by Loewen and Gonulal (2015), when naming a factor, it is important to come up with a descriptive label that represents all items loading onto that particular factor, paying particular heed to items that have the highest load. The four items from the hypothesized Construct 1 (*Openness towards other cultures*) all mapped on Factor 6. In addition, so did one item from Construct 2 (*Multilingualism in general*) and one item from Construct 5 (*Use of background languages in learning and using English*). An analysis of what these items focus on resulted in the factor label *Openness towards other cultures*.

For Factor 5, high loadings from four items from three different hypothesized constructs were observed. These items seemed to focus on the importance of maintaining other languages than the majority language (Swedish). Factor 5 was consequently labeled *Importance of maintaining other languages than the majority language (Swedish)*. Four items from the hypothesized Construct 6 loaded highly on Factor 4. What these items seemed to have in common was *The importance of proficiency in the majority language*.

Regarding Factor 3, four items loaded on this factor, dominated by three from the hypothesized Construct 3 (*The current language situation in Sweden*), and with one item from the hypothesized Construct 2 (*Multilingualism in general*). These items rendered the label *Importance of multilingualism for future employment and success in Sweden*.

For Factor 2, no less than 11 items were observed with high loading: 8 items from the hypothesized Construct 5 (*Monolingual beliefs in*

education), 2 items from Construct 4 (*The use of background languages when learning an additional language*) and 1 item from Construct 6. The common denominator was seen as *Positive attitudes to background languages when learning English*.

Finally, for Factor 1, four items were observed to have high loadings. They all came from the hypothesized Construct 5 (*The use of background languages when learning and using English*). An analysis rendered the following label: *Importance of background languages for receptive and productive English skills*.

Phase V: Content and design of MultiBAP questionnaire

The analysis accounted for above resulted in a set of 33 multiscale items for MultiBAP Part A (beliefs). In order to check the reliability of the new subscales, Cronbach's alpha was computed (see Appendix 3). The reliability values observed were 0.84, 0.80, 0.81, 0.73, 0.68 and 0.75, with a mean of 0.77. This is wholly satisfactory as most guidelines point to 0.7 as a desirable minimal level (Dörnyei & Taguchi, 2010).

As regards Part B (practices), there was no EFA to rely on. However, the multiscale item reliability analysis revealed that two of the 'original' constructs (B5, *Use of background languages in learning and using English*, and B6, *Monolingual beliefs in education*) in the FINAL Questionnaire were reliable, and it was therefore decided to include them in the MultiBAP Instrument (see Appendix 1). Altogether, Part B of the MultiBAP Instrument includes 31 closed items and 1 open question. In sum, then, the MultiBAP Instrument contains two parts: 'Beliefs' (33 closed + 1 open) and 'Practices' (31 closed + 1 open), in total 66 items/questions (64 closed + 2 open). Note that both original constructs B1 (*Openness towards other cultures*) and B2 (*Multilingualism in general*) were unreliable and therefore excluded. However, although excluded as 'scales', individual questions in B1 and B2 may nevertheless be useful in future studies, as answers to the various questions can be informative. For example, in multilingual settings, to what extent do schools view students' cultural backgrounds as resources (see B1.3, Appendix 1)? In addition to the MultiBAP Instrument, the full-length MultiBAP Questionnaire also contains the items/questions included in B1, B2 and Part C of the FINAL Questionnaire (see Appendix 1).

Discussion

We aimed to account for the development and initial validation of MultiBAP, a questionnaire instrument designed to map teacher beliefs and practices, as well as school practices, about multilingualism. A review of existing instruments revealed a lack of one that served the purposes of our parent study, MultiLingual Spaces (Källkvist *et al.*, 2017). The

construction process was guided by best practice advice *inter alia* in Dörnyei and Taguchi (2010), Loewen and Gonulal (2015) and Plonsky and Gonulal (2015). The result is the questionnaire instrument named MultiBAP, included as Appendix 5.

Initial validation of MultiBAP entailed going from *a priori* postulated constructs and pertinent multi-item scales to an evidence-based modification of these. This modification entailed revising the content in Part A in the light of an EFA. Such analysis provided construct-related validity in the sense that we sought to investigate what latent traits our instrument was tapping into. The EFA made us modify the way in which items were linked to assumed constructs. For example, all the items assumed to relate to the *a priori* construct *Openness towards other cultures* clustered together with one item from the *a priori* construct *Multilingualism in general*, and another from *Use of background languages in learning and using English*. There were also some interesting groupings of items, such as the separation of items related to the importance of drawing on background languages for receptive English skills from items related to the importance of drawing on background languages for productive skills. The mean scores of the items linked to those two factors reveal that items targeting receptive skills received higher scores than items targeting productive skills. This could emanate from a belief that receptive skills such as listening and reading may involve an individual's background languages more so than the productive skills.

In terms of reliability, the multi-item scales in MultiBAP Part A rendered respectable coefficients, as did two of the scales in Part B. Thus, this aspect of validity is promising. However, the type of reliability used is sample-dependent, and technically not really a characteristic of the instrument itself, but rather of the sample scores. As suggested by Knoch and McNamara (2015), this can be overcome through the use of Item Response Theory (IRT) approaches, such as extended Rasch models. Consequently, such analyses could provide for further validation of MultiBAP.

Limitations

Some limitations need to be addressed. For example, it was not possible to carry out a factor analysis of Part B items. Thus, only results from reliability analyses of the FINAL Questionnaire are available. Although the overall reliability of Part B was good (0.894), the reliability of constructs B1 (0.3) and B2 (0.465) was unsatisfactory. Thus, if used, this must be kept in mind. In contrast, the reliability values of constructs B5 (0.855) and B6 (0.712) were high, so those constructs can be used. Another potential limitation is the number of respondents. Admittedly, a higher number would have been preferred, but considering the time and effort invested in establishing a random sample, the outcome was satisfactory, in particular in light of multilingualism in Swedish schools being a politically charged

topic at the time (and still is). Finally, the number of respondents comes out well in comparison with previous questionnaire studies of teacher beliefs (cf. Borg, 2015), and the response rate is in line with similar studies (Granfeldt *et al.*, 2019; Henry *et al.*, 2018).

Suggested use

The developed and validated questionnaire consists of Parts A, B and C, of which the first two constitutes the MultiBAP Instrument. For example, MultiBAP can be adapted to mapping beliefs and practices about multilingualism in teaching other additional languages by replacing ‘English’ by another language. MultiBAP can also be used by teachers as a means of raising awareness and initiate professional discussion about prevailing beliefs in specific contexts. Similarly, Part C can be modified. Most likely, nine of the C-items (i.e. C1–C2, C5, C8, C11–C13, C17 and C19) target background variables that are core to many studies.

Conclusion

We have accounted for the construction, development and initial validation of MultiBAP, aimed at mapping teacher beliefs and practices about multilingualism. Care was taken to consider essential methodological procedures, and comprehensive reporting was provided for steps taken. It is hoped that our detailed appendices will aid future similar questionnaire design and validation projects. Suggestions for its use have been offered, outlining straightforward adaptations to contexts. Seeing the pursuit of validity (including reliability) as a perpetual process, initial evidence presented here is promising but may be extended, for example, by using interviews and think-aloud data from respondents while filling out MultiBAP. Finally, it goes without saying that mapping the beliefs and practices among the teachers in our sample is the ultimate aim of this research. These results gained from MultiBAP will be reported in Sundqvist *et al.* (in preparation).

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APPENDIX 1: PILOT and FINAL Versions of Items Included in MultiBAP, Including Cronbach's Alpha (Reliability Analyses), Mean Score, Mode, Standard Deviations, Corrected ITC, Cronbach's Alpha if Item Deleted, and Comment (Translated from Swedish into English)

PILOT items (participant sample <i>N</i> = 23)								FINAL items (participant sample <i>N</i> = 139, unless otherwise stated)						
Construct	Item Code	Item	Mean score (Mode)	SD	Corrected ITC	Cronbach's Alpha if item deleted	Comment	Construct	Item Code	Item	Mean score (Mode)	SD	Corrected ITC	Cronbach's Alpha if item deleted
A1 Cronbach's Alpha if keeping the 5 items from the pilot: 0.768 (but see removal of item A1.6)	A1.1	It is rewarding to travel to other countries	6.00 (6)	0.000			Not in final version	A1 Cronbach's Alpha for the 4 items: 0.679						
	A1.2	It is important to be in touch with people from other cultures	5.35 (6)	0.982	0.733	0.648			A1.1	It is important to be in touch with people from other cultures	5.53 (6)	0.802	0.586	0.555
	A1.3*	I mostly socialize with people who have the same cultural background as me	4.57 (6)	1.308			Not in final version							
	A1.4	Wanting to learn more languages comes with getting to know people from other cultures better	5.48 (6)	0.898	0.346	0.805			A1.2	Wanting to learn more languages follows from getting to know people from other cultures better	5.09 (6)	1.185	0.410	0.666
	A1.5	It is important to adapt to other people's habits and needs	4.13 (3)	1.254			Not in final version							
	A1.6	It is important to respect people with different opinions than one's own	6.00 (6)	0.000	0.000	0.820	Not in final version Commented in validation							
	A1.7*	I feel nervous when I am around people who have a cultural background that is different than my own	1.35 (1)	0.885			Not in final version							
	A1.8	It is important to show interest in people's cultural background	5.70 (6)	0.765	0.737	0.654			A1.4	It is important to show interest in people's cultural background	5.23 (6)	1.038	0.534	0.563
	A1.9	It is important that students get to work with tasks/projects about other countries and cultures	5.70 (6)	0.765	0.845	0.612			A1.5	It is important that students get to work with tasks/projects about	5.40 (6)	0.882	0.372	0.667

										other countries and cultures					
	A1.10	It is important for teachers to try to learn words and expressions in their students' background languages	3.22 (2)	1.476				Not in final version							
A2 Cronbach's Alpha if keeping the 6 items from the pilot: 0.686	A2.1	Multilingualism is something positive	5.83 (6)	0.491	0.465	0.662			A2 Cronbach's Alpha for the 5 items: 0.581	A2.1	Multilingualism is something positive	5.74 (6)	0.685	0.295	0.553
	A2.2	In today's world it is important to be multilingual	5.57 (6)	0.662	0.557	0.669				A2.2	In today's world it is important to be multilingual	5.42 (6)	0.868	0.440	0.476
	A2.3*	It is better to know one language really well than two or more less well	3.70 (3)	1.521				Not in final version							
	A2.4	For individuals who have another native language than the majority language in a society, it is important to keep this language alive.	5.57 (6)	0.896	0.402	0.652		Not in final version Comme nted in validatio n							
	A2.5	Individuals who know several languages are better learners in general	3.96 (4)	1.296				Not in final version							
	A2.6	Individuals who know several languages have a greater chance of success in the future	4.96 (6)	1.364	0.552	0.607				A2.4	Individuals who know several languages have a greater chance of success in the future	4.86 (6)	1.137	0.466	0.442
	A2.7	Individuals who know several languages come across as more intelligent than individuals who know only one language	4.13 (5)	1.576	0.447	0.659				A2.5	Individuals who know several languages come across as more intelligent than individuals who only know one language	4.61 (5)	1.288	0.301	0.574
	A2.8	There are more bi- and multilingual individuals in the world than monolingual	4.87 (6)	1.217				Not in final version							
	A2.9	In a school it is important that the leadership have a positive attitude towards multilingualism	5.70 (6)	0.703				Not in final version							
	A2.10	Individuals who keep their home language alive have a better chance of success in the future	4.74 (5)	1.010	0.375	0.659				A2.6	Individuals who keep all their languages alive will benefit from this in the future	5.56 (6)	0.703	0.261	0.565
A3 Cronbach's Alpha if keeping the 4 items from the pilot:	A3.1	In Sweden it is important that students with another home language than Swedish to keep this language alive	5.48 (6)	0.898	0.376	0.900			A3 Cronbach's Alpha for the 4 items: 0.707	A3.1	In Sweden it is important that multilingual students are allowed to keep all their languages alive. not just Swedish	5.41 (6)	0.907	0.128	0.821
	A3.2	In Sweden, in addition to Swedish it is more important to know English than any other language	5.17 (6)	1.370				Not in final version							

0.822	A3.3	In Sweden, your chances of getting a job increase if you are multilingual	5.30 (6)	0.765	0.799	0.710			A3.2	In Sweden, your chances of getting a job increase if you are multilingual	5.17 (6)	1.033	0.701	0.509
	A3.4*	I think that the status of Swedish is threatened by other languages	1.30 (1)	0.765			Not in final version							
	A3.5	If you learn English well, your chances of getting a job in Sweden increase	5.35 (6)	0.885	0.646	0.776			A3.3	If you learn English well, your chances of getting a job in Sweden increase	5.09 (6)	1.113	0.519	0.628
	A3.6	If you learn several languages, your chances of getting a good job in Sweden increase	5.39 (6)	0.783	0.834	0.690			A3.4	If you learn several languages, your chances of getting a good job in Sweden increase	5.17 (6)	1.116	0.679	0.514
	A3.7	OPEN QUESTION					Kept but moved							
A4 Cronbach's Alpha if keeping the 4 items from the pilot: 0.614	A4.1*	When learning an additional language, one should as little as possible draw on background languages	1.65 (1)	0.832	0.501	0.540		A4 Cronbach's Alpha for the 5 items: 0.595	A4.1*	When learning an additional language, one should as little as possible draw on background languages	2.42 (2)	1.279	0.445	0.487
	A4.2	Plenty of research shows that multilingualism is good when learning yet another language	5.17 (6)	1.072			Not in final version							
	A4.3*	When learning an additional language the influence of background languages is mostly negative	1.78 (1)	1.126	0.445	0.535			A4.2*	When learning an additional language the influence of background languages is mostly negative	1.96 (1)	1.066	0.296	0.567
	A4.4	In the process of learning an additional language, individuals should as often as possible be encouraged to use their background language(s)	4.43(5) †	1.308	0.459	0.521			A4.3	In the process of learning an additional language, individuals should as often as possible be encouraged to use their background language(s)	3.94 (3)	1.382	0.366	0.532
	A4.5	The more languages you know, the easier it is to learn yet another language	5.00 (6)	1.243	0.000	0.693			A4.4	The more languages you know, the easier it is to learn yet another language	4.69 (5)	1.166	0.314	0.558
	A4.6	In order to better learn a new language, the use of that language should be maximized in the classroom	5.65 (6)	0.714			Not in final version							
	A4.7*	In the process of learning an additional language, the use of background language(s) should be minimized in the classroom	3.87 (5)	1.632	0.361	0.571			A4.5	In the process of learning an additional language, the use of background language(s) should be minimized in the classroom	2.95 (3)	1.436	0.341	0.548
	A4.8	When using one of one's languages you can turn the other languages off so that they do not influence the former	2.43 (1)	1.441			Not in final version							

	A4.9	When a multilingual individual uses one of her languages, the other languages she knows are automatically activated in the brain	2.70 (1)	1.845			Not in final version							
	A4.10	In a multilingual individual, the languages are stored/represented in different parts of the brain.	2.61 (3)	1.305			Not in final version							
	A4.11	I know what the most recent research says about multilingualism in the classroom	3.39 (4) †	1.373	0.448	0.524	Not in final version							
A5 Cronbach's Alpha if keeping the 13 items from the pilot: 0.860	A5.1*	The teaching of English should be done through English only	4.57 (5)	1.237			Not in final version	A5 Cronbach's Alpha for the 13 items: 0.875						
	A5.2	The fact that students know other languages than Swedish is an asset in the teaching of English	4.91 (6)	1.240	0.442	0.855		A5.1	The fact that students know other languages than Swedish is an asset in the teaching of English	4.47 (6)	1.405	0.584	0.864	
	A5.3*	The fact that students know other languages than Swedish poses a problem in the teaching of English	2.00 (1)	1.414			Not in final version							
	A5.4	A teacher should allow students to use their background languages when doing exercises in the English classroom	4.65 (6)	1.434			Not in final version							
	A5.5	Students learn English best if they are allowed to use their background language(s) in the learning process	4.39 (3) †	1.270	0.530	0.850		A5.2	Students learn English best if they are allowed to use their background language(s) in the learning process	4.01 (4)	1.288	0.573	0.864	
	A5.6*	Students learn English best if they stick to English only	2.78 (1)	1.808	- 0.203	0.902		A5.3	Students learn English best if they stick to English only during English lessons.	3.99 (5)	1.518	0.541	0.866	
	A5.7	As a teacher of English, it is important to be familiar with students' language background(s), i.e., the language(s) they know and use	5.09 (6)	1.125	0.500	0.852		A5.4	As a teacher of English, it is important to be familiar with students' language background(s), i.e., the language(s) they know and use	4.79 (6)	1.126	0.548	0.866	
	A5.8	When students cannot think of an English word or expression, one should encourage them to try to think in one of their background languages	4.43 (6)	1.830	0.620	0.844		A5.5	When students cannot think of an English word or expression, one should encourage them to try to think in one of their background languages	4.15 (6)	1.532	0.746	0.854	
	A5.9	It is above all students with a low proficiency in English that benefit from using their background language(s) when learning English	3.48 (3)	1.563			Not in final version							
	A5.10	It is above all students with a high proficiency in English that benefit	2.26 (1) †	1.214			Not in final version							

		from using their background language(s) when learning English												
	A5.11	Student motivation to learn English is enhanced if they are allowed to use their background language(s) in the learning process	4.22 (5)	1.126	0.744	0.840			A5.6	Student motivation to learn English is enhanced if they are allowed to use their background language(s) in the learning process	4.07 (3)	1.289	0.713	0.856
	A5.12	Students' self-confidence increases if they are allowed to use their background languages when learning English.	4.83 (6)	1.114	0.668	0.844			A5.7	Students' self-confidence increases if they are allowed to use their background languages when learning English.	4.49 (6)	1.265	0.101	0.894
	A5.13	Teachers of English should strive for using learning materials in which connections are made between English and other languages.	3.39 (3)	1.559			Not in final version							
	A5.14	When students learn English grammar, it is important that they can use and draw on their background language(s)	4.57 (6)	1.237	0.534	0.850			A5.8	When students learn English grammar, it is important that they can use and draw on their background language(s)	4.91 (6)	1.083	0.390	0.873
	A5.15	When students learn English vocabulary, it is important that they can use and draw on their background language(s)	4.48 (6)	1.442	0.528	0.850			A5.9	When students learn English vocabulary, it is important that they can use and draw on their background language(s)	4.63 (6)	1.205	0.579	0.864
	A5.16	When students learn to write in English, it is important that they can use and draw on their background language(s)	3.96 (3)	1.296	0.700	0.840			A5.10	When students learn to write in English, it is important that they can use and draw on their background language(s)	4.50 (5)	1.200	0.651	0.860
	A5.17	When students listen in English, it is important that they can use and draw on their background language(s)	4.17 (4)	1.435	0.697	0.839			A5.11	When students listen in English, it is important that they can use and draw on their background language(s)	4.65 (5)	1.115	0.709	0.857
	A5.18	When students read in English, it is important that they can use and draw on their background language(s)	4.52 (6)	1.377	0.809	0.833			A5.12	When students read in English, it is important that they can use and draw on their background language(s)	4.67 (6)	1.125	0.429	0.872
	A5.19	When students speak/interact in English, it is important that they can use and draw on their background language(s)	3.83 (2) †	1.723	0.678	0.839			A5.13	When students speak/interact in English, it is important that they can use and draw on their background language(s)	4.04 (3)	1.356	0.718	0.857
A6 Cronbach's Alpha if keeping the	A6.1	Multilingual students should speak Swedish in school, not other languages they know from before	1.35 (1)	0.647	0.592	0.627		A6 Cronbach's Alpha for the 7 items:	A6.1	Multilingual students should speak Swedish in school, not other languages they know from before	3.55 (4)	1.630	0.585	0.640

7 items from the pilot: 0.674	A6.2	The most important cause of academic failure of multilingual students is their insufficient proficiency in Swedish	3.74 (3)	1.453	0.341	0.652		0.718	A6.2	The most important cause of academic failure of multilingual students is their insufficient proficiency in Swedish	4.19 (5)	1.439	0.474	0.674
	A6.3*	School libraries should carry books in the different mother tongues of the students	4.96 (6)	1.296	0.210	0.684			A6.3	School libraries should carry books in the different mother tongues of the students	5.13 (6)	1.209	0.365	0.700
	A6.4*	Multilingual students should be offered mother-tongue instruction at their schools	5.48 (6)	0.947	0.275	0.665			A6.4	Multilingual students should be offered mother-tongue instruction at their schools	5.64 (6)	0.860	0.400	0.699
	A6.5	By speaking their mother tongue(s) at school, multilingual students do not learn Swedish sufficiently	3.26 (3)	1.685	0.511	0.596			A6.5	By speaking their mother tongue(s) at school, multilingual students do not learn Swedish sufficiently	3.49 (3)	1.395	0.475	0.674
	A6.6*	Multilingual students should be offered regular school subjects in their mother tongue(s)	2.83 (3)	1.302	0.492	0.608			A6.6	Multilingual students should be offered regular school subjects in their mother tongue(s)	3.12 (2) †	1.514	0.257	0.730
	A6.7	It is more important that multilingual students obtain a high level of proficiency in Swedish than in their mother tongue(s)	2.83 (1)	1.696	0.439	0.624			A6.7	It is more important that multilingual students obtain a high level of proficiency in Swedish than in their mother tongue(s)	3.40 (3)	1.573	0.490	0.669
B1 Cronbach's Alpha if keeping the 2 items from the pilot: 0.659	B1.8 N=22	I take an interest in the cultural background of my students	5.36 (6)	1.093	0.512	- 0.286		B1 Cronbach's Alpha for the 3 items: 0.300	B1.1 N=135	I take an interest in the cultural background of my students	5.26 (6)	0.914	0.125	0.303
	B1.9 N=22	In my teaching, students get to work with tasks/projects about other countries and cultures	5.73 (6)	0.883	0.227	0.328			B1.2 N=133	In my teaching students get to work with tasks/projects about other countries and cultures	5.38 (6)	1.005	0.103	0.383
	B1.10 N=19	In my classes I try to learn words and expressions in the background languages of the students	2.74 (2)	1.368	0.054	0.701	Not in final version							
									B1.3 N=135	At my school diversity in the students' cultural background is an asset	4.76 (6)	1.259	0.294	- 0.040
B2 Cronbach's Alpha if keeping the 2 items from the pilot: 0.447	B2.1 N=21	In my teaching I see multilingualism as something positive	5.81 (6)	0.402	0.478			B2 Cronbach's Alpha for the 3 items: 0.465	B2.1 N=133	In my teaching I see multilingualism as something positive	5.37 (6)	1.007	0.348	0.335
	B2.9 N=20	At my school, the school leaders have a positive attitude towards multilingualism	5.05 (6)	1.234	0.478				B2.2 N=107	At my school, the school leaders have a positive attitude towards multilingualism	5.17 (6)	0.995	0.292	0.460
									B2.3 N=128	In my teaching, multilingualism creates more problems than possibilities	2.51 (1)	1.506	0.306	0.347

B5 Cronbach's Alpha if keeping the 25 items from the pilot: 0.841	B5.1* N=23	When I teach English, I use English only	4.09 (5)	1.411	0.616	0.826		B5 Cronbach's Alpha for the 24 items: 0.855	B5.1 N=139	When I teach English, I use English only	3.68 (5)	1.518	-0.129	0.857		
	B5.2 N=18	At my school, multilingualism is an asset when teaching English	3.39 (2)	1.614			Not in final version									
	B5.3* N=19	At my school, multilingualism (that students know other languages in addition to Swedish) is a problem when teaching English.	2.11 (1)	1.487	-0.270	0.848				B5.2 N=131	At my school, multilingualism is a problem when teaching English	2.05 (1)	1.343	0.506	0.846	
	B5.4 N=19	When I teach, I allow students to use their background language(s) when working on English tasks in the classroom	4.37 (5) †	1.461	0.599	0.826				B5.3 N=132	When I teach, I allow students to use their background language(s) when working on English tasks in the classroom	4.55 (6)	1.495	0.558	0.845	
	B5.5 N=17	In my teaching, students learn more English if they are allowed to use their background language(s) when learning	3.53 (3)	1.419						B5.4 N=121	In my teaching, students learn more English if they are allowed to use their background language(s) when learning	3.92 (4)	1.288	0.550	0.845	
	B5.6* N=22	In my teaching, students learn English best if they only use English	3.73 (3)	1.579	0.722	0.820				B5.5 N=137	In my teaching, students learn English best if they only use English	3.74 (5)	1.445	0.358	0.852	
	B5.7 N=22	As a teacher of English, I am familiar with my students' language background(s), that is, I know what other languages they know	4.73 (5)	1.120	0.383	0.838				B5.6 N=134	As a teacher of English, I am familiar with my students' language background(s), that is, I know what other languages they know	5.16 (6)	1.063	0.431	0.849	
	B5.8 N=19	When my students cannot think of an English word or expression, I encourage them to try to think in another language that they know	4.68 (6)	1.887	0.395	0.835				B5.7 N=134	When my students cannot think of an English word or expression, I encourage them to try to think in another language that they know	3.93 (6)	1.830	0.449	0.849	
	B5.13 N=20	As a teacher of English, I try to use learning materials in which connections between English and other languages are pointed out.	2.55 (1)	1.638			Not in final version									
	B5.20 N=22	In the syllabus for English (Lgr 11) and relevant commentary material it says that the teaching language should be English	4.27 (6)	1.932			Not in final version									
	B5.21 N=18	In my teaching, I try my best to learn a few words and expressions in the languages my multilingual students speak	3.06 (2)	1.697	0.792	0.819				B5.8 N=132	In my teaching, I try my best to learn a few words and expressions in the languages my multilingual students speak	2.86 (2)	1.652	0.588	0.843	
B5.22 N=21	In my teaching, I encourage my students to use all languages they know in the learning process	4.43 (6)	1.630	0.486	0.832			B5.9 N=136	In my teaching, I encourage my students to use all languages they know in the learning process	4.54 (6)	1.344	0.570	0.847			

B5.23 N=18	In my teaching of English, I encourage my students to share their culture	4.94 (6)	1.392	0.175	0.841		B5.10 N=135	In my teaching of English, I encourage my students to share their culture	4.46 (6)	1.359	0.408	0.850
B5.24 N=23	When I teach English, it is common that I use/translate into Swedish when giving instructions	2.78 (2)	1.678	0.519	0.831		B5.11 N=138	When I teach English, it is common that I use/translate into Swedish when giving instructions	4.12 (5)	1.506	-0.054	0.859
B5.25 N=21	When I teach English, it is common that I use/translate into Swedish when explaining grammar	5.38 (6)	0.740	-0.342	0.849		B5.12 N=139	When I teach English, it is common that I use/translate into Swedish when explaining grammar	5.02 (6)	1.176	-0.004	0.857
B5.26 N=23	When I teach English, it is common that I use/translate into Swedish when I explain the meaning of words	3.09 (2)	1.474	0.214	0.840		B5.13 N=139	When I teach English, it is common that I use/translate into Swedish when I explain the meaning of words	4.35 (5)	1.503	0.001	0.857
B5.27 N=22	When I teach English, it is common that I use/translate into Swedish when I explain idioms and fixed phrases	3.82 (5)	1.651	0.448	0.833		B5.14 N=138	When I teach English, it is common that I use/translate into Swedish when I explain idioms and fixed phrases	4.83 (6)	1.409	-0.007	0.858
B5.28 N=23	When I teach English, it is common that I use/translate into Swedish for classroom management	2.65 (1)	1.555	-0.011	0.846		B5.15 N=138	When I teach English, it is common that I use/translate into Swedish for classroom management	3.73 (6)	1.677	0.053	0.857
B5.29 N=19	When I teach English, it is common that I use/translate into other languages than English and Swedish when I give task instructions	1.95 (1)	1.580	0.857	0.816		B5.16 N=133	When I teach English, it is common that I use/translate into other languages than English and Swedish when I give task instructions	1.88 (1)	1.332	0.532	0.846
B5.30 N=19	When I teach English, it is common that I use/translate into other languages than English and Swedish when I explain grammar	2.37 (1)	1.674	0.712	0.822		B5.17 N=135	When I teach English, it is common that I use/translate into other languages than English and Swedish when I explain grammar	1.77 (1)	1.371	0.757	0.840
B5.31 N=21	When I teach English, it is common that I use/translate into other languages than English and Swedish when I explain the meaning of words	2.10 (1)	1.609	0.882	0.811		B5.18 N=133	When I teach English, it is common that I use/translate into other languages than English and Swedish when I explain the meaning of words	2.06 (1)	1.418	0.651	0.842
B5.32 N=18	When I teach English, it is common that I use/translate into other languages than English and Swedish when I explain words and fixed phrases	2.56 (2)	1.504	0.809	0.823		B5.19 N=134	When I teach English, it is common that I use/translate into other languages than English and Swedish when I explain words and fixed phrases	2.52 (1)	1.644	0.473	0.848
B5.33 N=18	When I teach English, it is common that I use/translate into	2.00 (1)	1.495	0.620	0.828		B5.20 N=133	When I teach English, it is common that I	1.65 (1)	1.292	0.618	0.843

		other languages than English and Swedish for classroom management								use/translate into other languages than English and Swedish for classroom management					
	B5.34 N=20	At my school, we often talk about how we should teach when there are multilingual students in the classroom	3.05 (1)	1.731	0.369	0.836				B5.21 N=129	At my school, we often talk about how we should teach when there are multilingual students in the classroom	3.43 (2)	1.758	0.546	0.844
	B5.35 N=20	At my school, there is a policy for what languages to use when teaching English	1.30 (1)	0.923	0.154	0.842				B5.22 N=116	At my school, there is a policy for what languages to use when teaching English	1.45 (1)	1.129	0.402	0.856
	B5.36 N=19	At my school, teachers often talk to students and/or parents about the role of background languages in learning English	2.42 (1)	1.465	0.021	0.845				B5.23 N=117	At my school, teachers often talk to students and/or parents about the role of background languages in learning English	2.96 (2)	1.494	0.506	0.849
	B5.37* N=21	If I, the teacher, do not know the background language(s) of a student, I should not encourage him/her to use it/them when learning English	2.14 (1)	1.459	0.688	0.826				B5.24 N=121	If I, the teacher, do not know the background language(s) of a student, I should not encourage him/her to use it/them when learning English	2.41 (1)	1.616	0.409	0.853
	B5.38	OPEN QUESTION					Kept but moved			B5.25					
B6 Cronbach's Alpha if keeping the 7 items from the pilot: 0.736	B6.1 N=21	At my school, multilingual students with other mother tongues than Swedish are not allowed to speak other languages than Swedish	1.24 (1)	0.768	0.561	0.682		B6 Cronbach's Alpha for the 7 items: 0.712	B6.1 N=130	At my school, multilingual students with other mother tongues than Swedish are not allowed to speak other languages than Swedish	1.42 (1)	0.852	0.509	0.666	
	B6.2 N=20	The most important cause of academic failure of multilingual students with other mother tongues than Swedish is their insufficient proficiency in Swedish	3.40 (3)	1.569	0.406	0.715			B6.2 N=129	The most important cause of academic failure of Multilingual students with other mother tongue than Swedish is their insufficient proficiency in Swedish	4.64 (6)	1.484	0.541	0.659	
	B6.3* N=17	At my school, the library carries books in the different mother tongues of the students	2.47 (1)	1.807	0.284	0.766			B6.3* N=101	At my school, the library carries books in the different mother tongues of the students	3.12 (2)	1.687	0.343	0.714	
	B6.4* N=22	At my school, multilingual students with other mother tongues than Swedish are offered home-language tuition	5.23 (6)	1.378	0.202	0.747			B6.4* N=134	At my school, multilingual students with other mother tongues than Swedish are offered mother tongue tuition	5.34 (6)	1.103	0.181	0.723	
	B6.5 N=19	At my school, by speaking their mother tongue(s) in school, multilingual students with other mother tongues than Swedish do not learn Swedish sufficiently	1.95 (1)	1.129	0.640	0.652			B6.5 N=117	At my school, by speaking their mother tongue(s) in school, multilingual students with other mother tongues	2.80 (1) †	1.561	0.563	0.638	

Construct	Item Code	Item	Mean score (mode)	SD	Corrected ITC	Cronbach's Alpha if item deleted	Comment	Construct	Item Code	Item	Mean score (mode)	SD	Corrected ITC	Cronbach's Alpha if item deleted	
	B6.6* N=22	At my school, multilingual students with other mother tongues than Swedish are offered regular school subjects in their mother tongue(s)	3.27 (4)	1.352	0.723	0.673			B6.6* N=123	At my school, multilingual students with other mother tongues than Swedish are offered regular school subjects in their mother tongue(s)	3.63 (6)	1.831	0.475	0.666	
	B6.7 N=20	At my school, it is more important that multilingual students who don't know Swedish reach a high level of proficiency in Swedish than in their mother tongue(s)	3.45 (1) †	1.731	0.534	0.684			B6.7 N=109	At my school, it is more important that multilingual students who do not know Swedish reach a high level of proficiency in Swedish than in their mother tongue(s)	3.83 (5)	1.514	0.443	0.676	
PILOT items (participant sample N = 23)								FINAL items (participant sample N = 139, unless otherwise stated)							

* = Items with reverse coding. Items were not reversed for calculating Means and SDs, but were reversed for reliability values.

† = Multiple modes exist – the smallest value is reported here (as per SPSS output files)

PILOT Overall reliability Part A: 0.790 FINAL Overall reliability Part A: 0.828

PILOT Overall reliability Part B: 0.788 FINAL Overall reliability Part B: 0.894

PILOT Overall reliability Part A+B: 0.779 FINAL Overall reliability Part A+B: 0.882

APPENDIX 2: Details about the Stratified Random Sampling Procedure

To identify teachers representing a random sample of L2 English teacher in Sweden, official statistics from the Swedish Association of Local Authorities and Regions, that is, SALAR

(<https://skl.se/tjanster/kommunerlandsting/faktakommunerochlandsting/kommungruppsindelning.2051.htm>) and Statistics Sweden (<https://www.scb.se/en/>) were used. Table 1 shows the population statistics for the 2017 SALAR categories and Table 2 shows the selection of schools per SALAR category, proportional to the population.

Table 1 Population statistics for the 2017 SALAR categories

	SALAR category	Municipalities (N)	Population (June 2016)	% of pop. per SALAR category
A	LARGE CITIES AND MUNICIPALITIES NEAR LARGE CITIES	46	3 621 404	36.6%
A1	Large cities	3	1 804 479	18.2%
A2	Commuting municipalities near large cities	43	1 816 925	18.3%
B	MEDIUM-SIZED TOWNS AND MUNICIPALITIES NEAR MEDIUM-SIZED TOWNS	108	3 774 775	38.1%
B3	Medium-sized towns	21	2 328 894	23.5%
B4	Commuting municipalities near medium-sized towns	52	826 499	8.3%
B5	Commuting municipalities with a low commuting rate near medium-sized towns	35	619 382	6.3%
C	SMALLER TOWNS/URBAN AREAS AND RURAL MUNICIPALITIES	136	2 510 152	25.3%
C6	Small towns	29	1 275 824	12.9%
C7	Commuting municipalities near small towns	52	590 818	6.0%
C8	Rural municipalities	40	495 540	5.0%
C9	Rural municipalities with a visitor industry	15	147 970	1.5%
	SWEDEN	290	9 906 331	100.0%

Table 2 Selection of schools per SALAR category, proportional to population

SALAR cat.	Municipali-ties (<i>N</i>)	% of pop. per SALAR category	Number of schools, est. from population	Number of schools to sample	Number of schools to sample (adjusted)
A	46	36.6%	1,771	37	37
A1	3	18.2%	883	18	18
A2	43	18.3%	888	19	19
B	108	38.1%	1,844	38	38
B3	21	23.5%	1,137	24	21*
B4	52	8.3%	402	8	8
B5	35	6.3%	305	6	6
C	136	25.3%	1,224	25	25
C6	29	12.9%	623	13	13
C7	52	6.0%	289	6	6
C8	40	5.0%	241	5	5
C9	15	1.5%	71	1	5**
	290	100.0%	4,839	100	101

* Adjusted so that one school is selected per municipality (there are 21 municipalities).

** Adjusted so that no category includes fewer than five schools.

Comment on Schools per Municipality

As per Table 2 above, the selection of schools per municipality category was constrained in the following ways:

- 6 schools were selected for each of the 3 ‘A1 municipalities’
- 1 school was selected for each of the 21 ‘B3 municipalities’
- When there were fewer than 1 school per municipality to be drawn, a random subset of municipalities was chosen and 1 school was selected for each of those. For instance, for category C8, 5 random municipalities out of 40 were chosen, and 1 school was randomly selected from within each municipality.

The actual number of responding teachers per SALAR category in our random sample are reported in Table 3 (see column ‘Number of respondents in random sample (*N*)’). There are corresponding percentages of the statistical population, for the teachers of each SALAR category, in the column called ‘% of statistical pop. in random sample’. As shown in Table 3, there is an underrepresentation of teachers from the SALAR category ‘A1’ by 10 percentage points. These percentage points are ‘distributed’ to SALAR categories in both ‘B’ and ‘C’. There is an overrepresentation of teachers in

SALAR category C9, but this can be explained by the necessary adjustment of the number of schools to be included (for the purpose of avoiding having categories with less than 5 schools). In sum, despite a slight underrepresentation of teachers from SALAR category ‘A’ (that is, from the metropolitan cities and from municipalities at a commuting distance from these cities), it seems reasonable to consider our random sample representative of secondary school L2 English teachers in Sweden.

Table 3 Selection of schools per SALAR category, proportional to population, with sampling of schools drawn to sample, plus actual number of respondents per SALAR category in random sample and corresponding percentages

SALAR category	Municipalities (N)	% of pop. per SALAR category	Number of schools, est. from population	Number of schools to drawn sample	Number of schools to drawn sample (adjusted)	Number of respondents in random sample (N)	% of statistical pop. in random sample
A	46	36.6%	1,771	37	37	35	25.1%
A1	3	18.2%	883	18	18	12	8.6%
A2	43	18.3%	888	19	19	23	16.6%
B	108	38.1%	1,844	38	38	62	44.6%
B3	21	23.5%	1,137	24	21*	35	25.2%
B4	52	8.3%	402	8	8	16	11.5%
B5	35	6.3%	305	6	6	11	9.9%
C	136	25.3%	1,224	25	25	42	30.2%
C6	29	12.9%	623	13	13	16	11.5%
C7	52	6.0%	289	6	6	10	7.2%
C8	40	5.0%	241	5	5	6	4.3%
C9	15	1.5%	71	1	5**	10	7.2%
	290	100.0%	4,839	100	101	139	100.0 %

* Adjusted so that one school is selected per municipality (there are 21 municipalities).

** Adjusted so that no category includes fewer than five schools.

APPENDIX 3: Results from Factor Analysis of Part A (Beliefs) of the MultiBAP Questionnaire

The six MultiBAP Part A (Beliefs) factors/constructs and their multi-item scale reliability coefficients (Cronbach's Alpha)

		Number of Items	Multi-item Scale Alpha
1	Importance of background languages for receptive and productive English skills	4	0.84
2	Positive attitude to background languages when learning English	11	0.80
3	Importance of multilingualism for future employment in Sweden and success	4	0.81
4	The importance of proficiency in the majority language	4	0.73
5	Importance of multilingualism and maintaining other languages than the majority language (Swedish)	4	0.68
6	Openness towards other cultures	6	0.75

Please see overleaf for the MultiBAP items – Part A (Beliefs)

MultiBAP Items – Pattern Matrix for Items in Part A: Beliefs

Q	Item	FACTORS					
		1	2	3	4	5	6
A5.11	When students listen in English, it is important that they can use and draw on their background language(s)	0.983					
A5.12	When students read in English, it is important that they can use and draw on their background language(s)	0.977					
A5.8	When students learn English grammar, it is important that they can use and draw on their background language(s)	0.467					
A5.10	When students learn to write in English, it is important that they can use and draw on their background language(s)	0.373	0.358				
A5.7	Students' self-confidence increases if they are allowed to use their background language(s) when learning English.		0.758				
A5.2	Students learn English best if they are allowed to use their background language(s) in the learning process		0.687				
A4.3	In the process of learning an additional language, individuals should as often as possible be encouraged to use their background language(s)		0.686				
A5.13	When students speak/interact in English, it is important that they can use and draw on their background language(s)		0.667				
A5.6	Student motivation to learn English is enhanced if they are allowed to use their background language(s) in the learning process		0.662				
A5.9	When students learn English vocabulary, it is important that they can use and draw on their background language(s)		0.644				
A5.5	When students cannot think of an English word or expression, one should encourage them to try to think in one of their background languages		0.611				
A5.1	The fact that students know other languages than Swedish is an asset in the teaching of English		0.403				
A6.6	Multilingual students should be offered regular school subjects in their mother tongue(s)		0.375				
A4.1	When learning an additional language, one should as little as possible draw on background languages		-0.337		0.332		
A5.3	Students learn English best if they stick to only English during English lessons		-0.323				
A3.4	If you learn several languages, your chances of getting a good job in Sweden increase			0.895			
A3.2	In Sweden, your chances of getting a job increase if you are multilingual			0.784			

A3.3	If you learn English well, your chances of getting a job in Sweden increase			0.615			
A2.4	Individuals who know several languages have a greater chance of success in the future	0.365		0.525			
A6.1	Multilingual students should speak Swedish in school, not other languages they know from before				0.775		
A6.5	By speaking their mother tongue(s) at school, multilingual students do not learn Swedish sufficiently				0.632		
*A4.5	In the process of learning an additional language, the use of background language(s) should be minimized in the classroom				0.560		
A6.2	The most important cause of academic failure of multilingual students is their insufficient proficiency in Swedish				0.532		
***A2.5	Individuals who know several languages come across as more intelligent than individuals who know only one language	n	o	l	o	a	d
A3.1	In Sweden it is important that multilingual students are allowed to keep all their languages alive, not just Swedish					0.780	
A6.4	Multilingual students should be offered mother-tongue instruction at their schools					0.659	
A2.6	Individuals who keep all their languages alive will benefit from this in the future					0.476	
A6.3	School libraries should also carry books in the different mother-tongue languages of the students					0.450	
**A6.7	It is more important that multilingual students reach a high level of proficiency in Swedish than in their mother tongue(s)				0.361	-0.367	
A1.1	It is important to be in touch with people from other cultures						0.734
A1.4	It is important to show interest in people's cultural background						0.638
A2.2	In today's world it is important to be multilingual						0.610
A1.5	It is important that students get to work with tasks/projects about other countries and cultures						0.482
A1.2	Wanting to learn more languages follows from getting to know people from other cultures better						0.477
A5.4	As a teacher of English, it is important to be familiar with students' language background(s), i.e., what other language(s) they know and use		0.338				0.340
***A2.1	Multilingualism is something positive	n	o	l	o	a	d

***A4.4	The more languages you know, the easier it is to learn yet another language	n	o	l	o	a	d
***A4.2	When learning an additional language the influence of background languages is mostly negative	n	o	l	o	a	d

Note. Designations in the Q column refer to the item code used in the FINAL version of the questionnaire. The values in the matrix correspond to rotated factor loadings. Factor loadings of < 0.3 have been suppressed.

* = This item caused very low reliability for its subscale and was therefore discarded.

** = This item had a slightly higher factor loading on factor 5, but it caused low reliability in that subscale and was therefore grouped in factor 4, where it had a very similar loading

*** = This item had no factor loading above .30

APPENDIX 4: Eigenvalues and Total Variance Explained for with a 6–Factor Solution (38 Items from Part A: Beliefs); Extraction: Maximum Likelihood Factoring

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.824	23.221	23.221	8.824	23.221	23.221	7.143
2	3.498	9.204	32.425	3.498	9.204	32.425	3.177
3	2.969	7.814	40.239	2.969	7.814	40.239	3.746
4	2.163	5.692	45.931	2.163	5.692	45.931	3.591
5	1.833	4.823	50.753	1.833	4.823	50.753	3.222
6	1.657	4.361	55.114	1.657	4.361	55.114	3.968
7	1.490	3.921	59.035				
8	1.298	3.414	62.449				
9	1.143	3.009	65.458				
10	1.048	2.759	68.217				
11	1.002	2.636	70.853				
12	0.877	2.308	73.161				
13	0.781	2.056	75.217				
14	0.760	2.000	77.217				
15	0.714	1.880	79.097				
16	0.663	1.744	80.841				
17	0.614	1.615	82.456				
18	0.585	1.539	83.994				
19	0.542	1.428	85.422				
20	0.513	1.351	86.773				
21	0.505	1.329	88.102				
22	0.460	1.211	89.312				
23	0.455	1.198	90.510				
24	0.404	1.064	91.574				
25	0.384	1.009	92.584				
26	0.354	0.932	93.516				
27	0.332	0.874	94.390				
28	0.316	0.833	95.223				
29	0.284	0.746	95.969				
30	0.279	0.733	96.702				
31	0.235	0.619	97.321				
32	0.218	0.575	97.895				
33	0.202	0.531	98.426				
34	0.190	0.499	98.925				
35	0.152	0.399	99.324				
36	0.119	0.312	99.636				
37	0.114	0.300	99.937				
38	0.024	0.063	100.000				

APPENDIX 5: The MultiBAP Questionnaire (including the MultiBAP Instrument)

MultiBAP (Multilingualism: Teacher Beliefs And Practices) – An instrument for mapping teacher beliefs and practices about multilingualism

- Note that the *MultiBAP Questionnaire* includes the official *MultiBAP Instrument* (= Parts A and B) and background questions (Part C).
- The instructions below are identical to what was used in the FINAL Questionnaire, but translated from Swedish into English.
- Square brackets in questions/items indicate where changes relating to the majority language or country – [majority language/country] – need to be made by users of the MultiBAP Questionnaire.
- Curly brackets in questions/items indicate where changes relating to the target language – {target language} – need to be made by users of the MultiBAP Questionnaire.

To Teachers of English, Grades 6–9

This questionnaire is part of the research project MultiLingual Spaces focusing on the teaching of English in classrooms with language diversity. There are no correct or incorrect answers to the questions, and you do not need to write your name anywhere. You can save your answers and continue at a later time. In order for this to work, the questionnaire software connects the answers to your e-mail address. In line with best practice in research ethics, however, your answers will be anonymized.

Answering the questionnaire will take 15–20 minutes. We are interested in your personal views and thoughts on multilingualism, and also your experience (or lack of) of teaching English in classrooms with multilingual students. Research on multilingualism in English classrooms is currently limited, and your answers will contribute to bridging the gap. The results from the questionnaire will be relevant for *all* English teachers, irrespective of how many multilingual students you have.

The questionnaire consists of three parts. In the first one, Part A, there will be questions about thoughts on multilingualism and language learning. After that, in Part B, there will be questions to do with your own teaching practice and your school. Finally, in the third part, Part C, we will ask you to answer some background questions.

Please answer each question as honestly as you can – this will make the results more valid.

With best wishes,

The Research Team

Part A. Teacher Beliefs

In this part, we ask you to state to what degree you agree with the following statements, from 1 = I fully disagree, to 6 = I fully agree. Please answer all questions.

Multilingual learners are here defined as learners of {English} who use [Swedish] and one or several additional languages (e.g. Arabic, Finnish, Somali) in their everyday life. Proficiency in the different languages may vary.

Background languages are here defined as the languages that the learners already know. For a learner who speaks, for example, Arabic and [Swedish], these languages constitute the learner's background languages in the context of learning or using {English}.

Construct 1: Importance of background languages for receptive and productive {English} skills

- A1 When students listen in {English}, it is important that they can use and draw on their background language(s)
- A2 When students read in {English}, it is important that they can use and draw on their background language(s)
- A3 When students learn {English} grammar, it is important that they can use and draw on their background language(s)
- A4 When students learn to write in {English}, it is important that they can use and draw on their background language(s)

Construct 2: Positive attitudes to background languages when learning {English}

- A5 Students' self-confidence increases if they are allowed to use their background languages when learning {English}.
- A6 Students learn {English} best if they are allowed to use their background language(s) in the learning process
- A7 In the process of learning an additional language, individuals should be encouraged to use their background language(s) as often as possible
- A8 When students speak/interact in {English}, it is important that they can use and draw on their background language(s)
- A9 Student motivation to learn {English} is enhanced if they are allowed to use their background language(s) in the learning process
- A10 When students learn {English} vocabulary, it is important that they can use and draw on their background language(s)
- A11 When students cannot think of an {English} word or expression, one should encourage them to try to think in one of their background languages
- A12 The fact that students know other languages than [Swedish] is an asset in the teaching of {English}
- A13 Multilingual students should be offered regular school subjects in their mother tongue(s)
- A14 When learning an additional language, one should draw on background languages as little as possible
- A15 Students learn {English} best if they stick to only {English} during {English} lessons

Construct 3: Importance of multilingualism for future employment and success in [Sweden]

- A16 If you learn several languages, your chances of getting a good job in [Sweden] increase
- A17 In [Sweden], your chances of getting a job increase if you are multilingual
- A18 If you learn {English} well, your chances of getting a job in [Sweden] increase
- A19 Individuals who know several languages have a greater chance of success in the future

Construct 4: The importance of proficiency in the majority language

- A20 Multilingual students should speak [Swedish] in school, not other languages they know from before
- A21 By speaking their mother tongue(s) at school, multilingual students do not learn [Swedish] sufficiently
- A22 It is more important that multilingual students obtain a high level of proficiency in [Swedish] than in their mother tongue(s)
- A23 The most important cause of academic failure among multilingual students is their insufficient proficiency in [Swedish]

Construct 5: Importance of multilingualism and maintaining other languages than the majority language [Swedish]

- A24 In [Sweden] it is important that multilingual students are allowed to keep all their languages alive, not just [Swedish]
- A25 Multilingual students should be offered mother-tongue instruction at their schools
- A26 Individuals who keep all their languages alive will benefit from this in the future
- A27 School libraries should carry books in the different mother tongues of the students

Construct 6: Openness towards other cultures

- A28 It is important to be in touch with people from other cultures
- A29 It is important to show interest in people's cultural background
- A30 In today's world it is important to be multilingual
- A31 It is important that students have the opportunity to work with tasks/projects about other countries and cultures
- A32 Wanting to learn more languages follows from getting to know people from other cultures better
- A33 As a teacher of {English}, it is important to be familiar with students' language background(s), i.e., what other language(s) they know and use

Open question

A34 We are curious about your thoughts on language guidelines or policies, for example, the Language Act which was passed in 2009. The Language Act states that Swedish is the main language in Sweden and that there are five national minority languages: Finnish, Yiddish, Meänkieli, Romany, and Sami. The Language Act also contains regulations about the responsibility of the public sector when it comes to the rights of individuals as to their access to language and the use of language in public life. Is there a language policy at your school? If so, what does it look like? In your opinion, is it a good thing that Sweden has a Language Act? Please write down your thoughts here.

Part B. Your Teaching Practices and Your School

In this part, we ask you to state the degree to which you agree with the following statements, from 1 = I fully disagree, to 6 = I fully agree. In this part you can also use the answer “not relevant for me or my school / I don’t know”. Please answer all questions.

The definitions of ‘multilingual students’ and ‘background languages’ are the same as in Part A.

Multilingual learners are here defined as learners of {English} who use [Swedish] and one or several additional languages (e.g. Arabic, Finnish, Somali) in their everyday life. Proficiency in the different languages may vary.

Background languages are here defined as the languages that the learners already know. For a learner who speaks, for example, Arabic and [Swedish], these languages constitute the learner’s background languages in the context of learning or using {English}.

Construct B5: Use of background languages in learning and using {English} (see Appendix 1 for the results of the analytical work)

- B1 When I teach {English}, I use {English} only
- B2 At my school, multilingualism is a problem when teaching {English}
- B3 When I teach, I allow students to use their background language(s) when working on {English} tasks in the classroom
- B4 In my teaching, students learn more {English} if they are allowed to use their background language(s) when learning
- B5 In my teaching, students learn {English} best if they only use {English}
- B6 As a teacher of {English}, I am familiar with my students’ language background(s), that is, I know what other languages they know
- B7 When my students cannot think of an {English} word or expression, I encourage them to try to think in another language that they know
- B8 In my teaching, I try my best to learn a few words and expressions in the languages my multilingual students speak
- B9 In my teaching, I encourage my students to use all languages they know in the learning process
- B10 In my teaching of {English}, I encourage my students to share their culture

- B11 When I teach {English}, it is common that I use/translate into [Swedish] when giving instructions
- B12 When I teach {English}, it is common that I use/translate into [Swedish] when explaining grammar
- B13 When I teach {English}, it is common that I use/translate into [Swedish] when I explain the meaning of words
- B14 When I teach {English}, it is common that I use/translate into [Swedish] when I explain idioms and fixed phrases
- B15 When I teach {English}, it is common that I use/translate into [Swedish] for classroom management
- B16 When I teach {English}, it is common that I use/translate into other languages than {English} and [Swedish] when I give instructions for tasks
- B17 When I teach {English}, it is common that I use/translate into other languages than {English} and [Swedish] when I explain grammar
- B18 When I teach {English}, it is common that I use/translate into other languages than {English} and [Swedish] when I explain the meaning of words
- B19 When I teach {English}, it is common that I use/translate into other languages than {English} and [Swedish] when I explain words and fixed phrases
- B20 When I teach {English}, it is common that I use/translate into other languages than {English} and [Swedish] for classroom management
- B21 At my school, we often talk about how to teach when there are multilingual students in the classroom
- B22 At my school, there is a policy for what languages to use when teaching {English}
- B23 At my school, teachers often talk to students and/or parents about the role of background languages in learning {English}
- B24 If I, the teacher, do not know the background language(s) of a student, I should not encourage him/her to use it/them when learning {English}

Construct B6: Monolingual beliefs in education (see Appendix 1 for the results of the analytical work)

- B25 At my school, multilingual students with other mother tongues than [Swedish] are not allowed to speak other languages than [Swedish]
- B26 The most important cause of academic failure among multilingual students with other mother tongues than [Swedish] is their insufficient proficiency in [Swedish]
- B27 At my school, the library carries books in the different mother tongues of the students
- B28 At my school, multilingual students with other mother tongues than [Swedish] are offered mother-tongue tuition

- B29 At my school, by speaking their mother tongue(s) in school, multilingual students with other mother tongues than [Swedish] do not learn [Swedish] sufficiently
- B30 At my school, multilingual students with other mother tongues than [Swedish] are offered regular school subjects in their mother tongue(s)
- B31 At my school, it is more important that multilingual students who do not know [Swedish] reach a high level of proficiency in [Swedish] than in their mother tongue(s)

Open question

- B32 What are the challenges or opportunities of teaching in a multilingual classroom? What is your opinion of what it is like to teach multilingual students, and how does this affect your way of teaching?

Part C. Background Questions

C1. Gender

- Female
 Male
 Other
 I prefer not to answer

C2. Year of birth (full year, e.g., 1972)

C3. In which municipality do you work?

[List of [Swedish] municipalities]

C4. At what type of school do you currently work?

- Municipal school
 Independent school

C5. Do you hold a degree from a teacher-education program?

- Yes
 No

C5. Follow-up question. Please specify what type of degree you hold from a teacher-education program, including your specialization (e.g., “Teacher grades 4–9, Geography and Swedish as a Second Language” or “Teacher grades 10–12: Swedish and English”)

C6. Are you a certified teacher for teaching {English} in secondary school?

- Yes
 No

C7. How many ECTS credits for higher education in {English} do you have? Make an estimate and if uncertain, choose a close alternative.

[List of alternatives: 0, 1–15, 16–30, 31–45, 46–60, 61–75, 76–90, more than 90]

C8. How many years have you been working as a teacher of {English}?

C9. While working as a teacher, in which grades have you taught {English}? Please tick all relevant options.

- Grade 6
 Grade 7

- Grade 8
- Grade 9

C10. What/Which of the school subjects below do you teach in addition to {English}? Please tick all relevant options.

- Arts
- Biology
- Physics
- Geography
- Home Economics
- History
- Physical Education and Health
- Chemistry
- Mathematics
- Music
- Religious Studies
- Social Sciences
- Crafts
- Swedish
- Swedish as a Second Language
- Technology
- Sign Language
- Modern languages: French
- Modern languages: Spanish
- Modern languages: German
- Modern languages: Other
- Mother Tongue (please specify what language(s)):

C11. What language or languages have you spoken since early childhood?

- [Swedish]
- Other language(s), namely:

C12. Which/what language(s) have you studied at school or at university/university college *in addition to {English} and [Swedish] or any other mother tongue?* It is possible to tick several options.

- French
- Greek
- Latin
- Russian
- Spanish
- German
- No other languages
- Other, namely:

C13. How would you describe your experience from teaching multilingual students in {English}? Please tick the box in front of the alternative that best corresponds to you.

- I have no experience from teaching multilingual students in {English}
- I have little experience from teaching multilingual students in {English}
- I have some experience from teaching multilingual students in {English}
- I have long experience from teaching multilingual students in {English}
- I have very long experience from teaching multilingual students in {English}

C14. How would you describe your experience from teaching newly arrived immigrant students in {English}? Please tick the box in front of the alternative that best corresponds to you.

- I have no experience from teaching newly arrived immigrant students in {English}
- I have little experience from teaching newly arrived immigrant students in {English}
- I have some experience from teaching newly arrived immigrant students in {English}
- I have long experience from teaching newly arrived immigrant students in {English}

I have very long experience from teaching newly arrived immigrant students in {English}

C15. In the current academic year, roughly how many students in your {English} class(es) are multilingual? It is possible to tick more than one option.

- No student in any group
- 1–4 students per group
- 5 or more students per group
- Please write a short comment, especially if none of the alternatives above apply to your situation.

C16. If you are teaching {English} to multilingual students this academic year, what languages are represented amongst these students?

C17. Have you been offered any specific in-service training about multilingualism by your employer?

- Yes
 - No
 - Other
- Comment:

C18. Does your school have routines and policies specifically about multilingualism and multilingual students (e.g., interpreters during parent-teacher meetings, a language policy, etc.)?

- Yes
 - No
 - Other
- Comment:

C19. How do you learn more about multilingual classrooms? It is possible to tick several options.

- I discuss with colleagues
- I am a member of teacher groups on social media
- I read articles in scientific journals
- I participate in conferences / further training / professional development
- I find information through various media (e.g., the internet, newspapers, radio, TV)
- Other, please specify:

Many thanks for your help and contribution to our research!

Questions/Items Excluded from the MultiBAP Questionnaire

Below you find four questions/items from Constructs A2 and A4 that were excluded from the MultiBAP Questionnaire due to too low loadings in the EFA. We list them here as we think that they are relevant questions/items in themselves, despite the outcome in the EFA. If used in future research, please pay attention to this observation.

Initial Construct A2

- A2.1 Multilingualism is something positive

Initial Construct A4

- A4.2 When learning an additional language the influence of background languages is mostly negative
- A4.4 The more languages you know, the easier it is to learn yet another language
- A4.5 In the process of learning an additional language, the use of background language(s) should be minimized in the classroom

Below you find the questions/items from Constructs B1 and B2 that were excluded from the MultiBAP Questionnaire due to low reliability. If used as scales in future research, take caution. Individual questions/items may be relevant to use in future research, depending on the aims.

Initial Construct B1

- B1.1 I take an interest in the cultural background of my students
- B1.2 In my teaching, students get to work with tasks/projects about countries and cultures
- B1.3 At my school, diversity in the students' cultural background is an asset

Initial Construct B2

- B2.1 In my teaching I see multilingualism as something positive
- B2.2 At my school, the school leaders have a positive attitude towards multilingualism
- B2.3 In my teaching, multilingualism creates more problems than possibilities