

## **Reaching agreement on how to quantify bilingualism**

### **A summary of “How to quantify bilingual experience? Findings from a Delphi consensus survey”**

There is currently no consensus on how to quantify bilingualism in children, which is evident from the wide range of questionnaires available for that purpose. This can be problematic for speech and language therapists (SLTs) who may need to quantify bilingualism in their clinical practice. The Q-BEx (Quantifying Bilingual Experience) team therefore sought to engage with researchers and practitioners to reach a consensus on what measures should be used to document bilingualism, and how this should be carried out.

In order to do this, the team used the Delphi consensus survey method with 132 panellists, comprised of SLTs, teachers and researchers, from 29 countries. The panellists rated their level of agreement with 124 statements on how to document bilingualism. Across all 3 professions, almost everyone agreed on the need for a common method to measure bilingualism. The panellists also reached agreement on which aspects of bilingualism to include and how these should be measured.

#### **Why do we need to document bilingual experience in children?**

Many researchers and practitioners regularly need to measure and understand a child's bilingual experience for several different purposes. There are many reasons why an SLT may need to quantify bilingualism; for example, they may wish to assess a child to support their differential diagnosis for a possible language disorder, and need accurate and reliable information on their client's language background as part of building a case history. Having access to this information is an important part of best clinical practice.

#### **Why can this be difficult?**

Currently, there is a wide variety of questionnaires which seek to document bilingualism in children, which can make it difficult for researchers and practitioners to compare data, to facilitate research-informed practice, and to gain a clear picture of a child's bilingual experience. The Q-BEx team reviewed 48 different questionnaires and found a huge variety in the information being collected and how this information was being elicited. The team identified the need for a more consistent tool to document bilingualism, which could be customisable for specific needs but based on an agreed set of questions. The Q-BEx team therefore needed to ensure that a consensus was reached by all potential users of the tool: SLTs, teachers and researchers.

#### **How was a consensus reached?**

The team adopted the Delphi consensus survey method.

1. They engaged 132 panellists (SLTs, teachers and researchers) from 29 countries across the professions, all with experience of working with bilingual children in different contexts.
2. They held a workshop with a subset of panellists to generate statements for agreement (e.g. the questionnaire should ask if the child attended school in another country). The review of existing questionnaires previously carried out by the Q-BEx team also informed the creation of the statements.
3. Panellists completed a first round of the online survey (completed anonymously to avoid bias). Panellists had to rate their agreement level with each of the 124 statements on a scale of 1-5 (strongly disagree-strongly agree), and were also able to leave comments. If panellists responded with 4 or 5 on the scale (agree or strongly agree) this was defined as agreement; statements where over 75% of panellists agreed were deemed to have reached consensus.
4. Panellists then completed a second round of the online survey – this round allowed the re-rating of statements that nearly reached consensus in light of everyone's round 1 ratings and comments.

## **Which statements reached consensus?**

Over the two rounds of surveys, 98 statements (or 79% of all statements) reached consensus. The Q-BEx team grouped these thematically; the themes are listed below with an example statement and percentage agreement for each:

<b>Theme</b>	<b>Example statement</b>	<b>%</b>
Mandate for a new tool to document bilingualism	<i>There needs to be a set of common measures of children's bilingual language experience, to allow comparability across studies and to facilitate communication across sectors (research, education, therapy).</i>	96
Language difficulties	<i>The questionnaire should ask about difficulties the child may have (had) with language, in order to identify what might require further assessment by specialists.</i>	83
Child's proficiency	<i>The questionnaire should not aim to measure the child's language proficiency. This should be done by other means.</i>	75
Exposure and use	<i>Exposure and use should be measured (for each language):</i> <i>(a) over an average week</i> <i>(c) over holiday and school periods separately</i> <i>(d) over home and school separately</i>	85 80 92
Child's education and literacy	<i>The questionnaire should ask if the child attended school in another country.</i>	92
Input quality	<i>The types of activity carried out in each language should be documented (e.g. storytelling, video games, play, etc.).</i>	81
Language mixing	<i>Language mixing should be estimated (in terms of exposure and use).</i>	77
Attitudes	<i>There should be a question probing whether the child is unwilling to speak one of his/her languages.</i>	84
Background information	<i>The child's languages should be identified precisely (e.g. variety, dialect).</i>	87
Questionnaire versions	<i>The questionnaire should be available in an online version, in a paper version, and as an interview protocol.</i>	95
Questionnaire modularity	<i>The questionnaire should contain thematic sections (e.g. on language exposure/use, on proficiency, on attitudes, etc.). Each section should be optional, and it should be up to the researchers/practitioners to select which section to use.</i>	87

The survey showed that there is almost unanimous agreement on the need to create a tool which will facilitate communication across sectors. The panellists agreed that certain aspects of bilingual experience need to be included: language exposure and use, language difficulties (though not as a diagnostic tool), input quality, background information, child's education and literacy, and language mixing. Furthermore, we can see a clear consensus that the questionnaire should be customisable, flexible and modular.

## **What does this mean for the future?**

The reached consensus will inform the design of a new questionnaire which SLTs, teachers and researchers can customise to suit their needs. This will enable: 1) data comparability, 2) more cross-over between research and practice and 3) clear, understandable and relevant information to be gained about bilingual children.