The University Of Sheffield.

A Q Methodological Study of the Support Valued by Students with English as an Additional Language

R L Stollery

Submitted for Doctor of Educational and Child Psychology (DEdCPsy)

April 2013

A Q Methodological Study of the Support Valued by Students with English as an Additional Language

Richard Luke Stollery

Submitted for Doctor of Educational and Child Psychology

Department of Educational Studies

April 2013

Abstract

This study investigated the viewpoints of students with English as an Additional Language (EAL). Specifically, I used Q methodology to highlight some of the viewpoints of learners with EAL on the strategies used by adults to support them in school. A Q set of 46 statements was produced, with each statement describing a strategy for supporting learners with EAL. The Q set was developed firstly through the use of two focus groups involving 11 students aged between 9 and 15, secondly through consultation with relevant professionals, and thirdly through a literature review. I then asked 30 participants aged between 9 and 18 to express their viewpoint through a Q sort exercise, by ranking strategies according to helpfulness. Factor analysis was used to identify viewpoints which were common to a group of participants. In the results section I present each of the emerging viewpoints as a Q sort arrangement, and also as a written description produced by interpreting the factor analysis results. The four viewpoints which emerge are discussed, along with the implications for professionals needing to provide personalised support, and also stay in touch with the viewpoints of individual students with EAL in school. It is hoped that the current research will address the need within the literature to include the voice of students with EAL in planning for their education.

Contents

1. Introduction

Many thousands of children with English as an Additional Language (EAL) are asked to cope with extraordinarily difficult linguistic demands in the UK education system. These pupils enter school not speaking the same language as many of their peers or the majority of the adults there to teach them. They learn English without the opportunity for explanation in their own language. Meanwhile they are expected to follow a curriculum at a rate deemed appropriate for pupils already fluent in English. Many of them also have special educational needs not related to their linguistic background.

In recognition of these demands, a huge literature has grown up around achieving positive outcomes for pupils with EAL, who number over 950,000 according to the latest government figures (Department for Education, 2011). This figure represents 14.4% of the school population over compulsory schooling age, and is rising year-on-year. The need for research on the views of these young people and how they experience school is therefore becoming more and more pressing.

I began reading more extensively about this topic during my first year of training as an educational psychologist. My interest derived partly from my previous career, preparing native Chinese speakers to study at degree level in the UK, using English to practise academic tasks such as essay writing, notetaking and discussions. As I became familiar with the literature, I was struck by the distance between the academic constructs employed (e.g. 'additive bilingualism' and 'subtractive bilingualism', introduced in section 2.2.1.1) and the thinking of the students with EAL themselves. One of the aims of the current research is therefore to provide a channel where the students are able to give their opinion of the research in their own terms.

'EAL' is a term mainly used in the UK education system. In the guidance document *Excellence and Enjoyment*, the Department for Education and Skills (DfES) gives the following definition:

> EAL stands for English as an additional language and recognises the fact that many children learning English in schools in this country already know one or more other languages and are adding English to that repertoire. (DfES, 2006, Page 2, Introductory guide).

In line with this definition, the term 'EAL' will be used in this thesis to describe a student who comes from a background where languages other than English are used, and the student's level of English is such that special consideration needs to be taken by school staff. The term therefore does not imply that English is not the student's most developed language. Students whose home language is less developed than their English due to their language-learning environment would still be described as having 'EAL'.

The DfES advise that students should still be thought of as having EAL when they have moved to a stage of conversational fluency in English. The research-based reasons for this are discussed at greater length in the literature review section below, but at this point it is worth noting that the DfES provides a separate definition for 'Advanced learner of EAL':

> Advanced learner of EAL is a term used by Ofsted to describe children who have had considerable exposure to English and are no longer in the early stages of English language acquisition. These are children, often born in this country, who appear to be fluent in ordinary everyday conversational contexts, but who require continued support in order to develop the cognitive and academic language necessary for educational success. (DfES, 2006, Page 2, Introductory guide).

As 'EAL' is a term mainly used in the UK, and because internationally there are many students for whom the additional language being learnt is not English, terms such as 'bilingual student' and 'bilingual education' are also used in this thesis. These terms are used with the same meaning as 'student with EAL' and 'education for students with EAL', except with an international scope. The use of the term 'bilingual' is not intended to exclude students speaking three or more languages, and also does not imply a level of proficiency in a second language.

The following chapter is a literature review of the current thinking about how bilingual students in schools can be supported. I will also present some of the literature on bilingualism and biculturalism which suggests that there may be a diversity of viewpoints about bilingual education. Chapter 3, Methodology, will describe Q methodology and how it was implemented in the study to find out some of the viewpoints present among students with EAL. Chapter 4, Analysis and Results, describes the process of analysis of the Q methodology procedure, with interpretations of the emerging factors presented in Chapter 5. Following this there will be a discussion of the results and their relation to the existing literature. Finally an evaluation of the study and some ideas for future directions will be presented.

2. Literature Review

The aim of this study is to gather the views of students with EAL on the strategies used to support them within school. As a result, this literature review will summarise research into what strategies are effective, and work which has already been done to gather students' opinions.

Although the main focus of the study is on school level factors, I will be drawing on an ecosystemic perspective, which acknowledges the links between different systems around the individual and the individual themself (Bronfenbrenner, 1979). The literature review will be divided into factors at different levels: society in general and the community around the school; the school; the family; and individual differences.

Although the main focus of the study is speakers of different languages, it is clear that the same individuals will also have a different cultural background. As a result research into different cultures will be discussed.

2.1 Factors at a Society / Community level

Baker (2006) identifies a typology of four broad positions that can be held about minority languages in a society. The first and most liberal position, "Pluralism", values linguistic and cultural diversity in society, aiming for integration between different groups who maintain their identity. Secondly, a position of "Civic Ideology" involves conformity to the values held by the majority cultural group, while different languages are still maintained. An "Assimilationist" position, valuing national unity and a lack of limiting boundaries between groups, argues for minority groups to adopt the language and culture of the national group. Finally, "Ethnist" ideology involves forcing minorities to relinquish their language and culture.

Within the UK, the final Ethnist ideology is not common within mainstream political debate. However, there are a variety of views which could be placed on a continuum between Pluralist and Assimilationist positions. Views can also be distinguished according to the domain in which language is used. For example, a person could be in favour of plurality in media and entertainment, while favouring monolingual education on grounds of preventing segregation.

Recent opinion in the UK seems to have moved more towards an assimilationist position, possibly as a political response to the increase in votes for far-right parties. The current Prime Minister has blamed unwillingness to learn English for poor social cohesion (Watt, 2011), long-term immigrants must now pass a citizenship test (British Broadcasting Corporation, 2008), and the rise of British power is to be emphasised in the school history curriculum (Higgins, 2010).

Although the debate over languages in society is largely ideological, it is possible that pragmatic factors may dominate personal and political decisions. Schmidt (2000) has pointed out that even if it is morally preferable for people to maintain their mother tongue, economic advancement is best achieved by adopting a majority language at the expense of maintaining mother tongue abilities. This argument seems to assume that learning a second language prevents full acquisition or maintenance of a first language. This is an empirical claim about the psychology of language learning and as will be discussed later, is not as clear cut as might be thought intuitively.

There is great variety in the UK in terms of the distribution of language groups in different areas. While some (mostly rural) areas are largely monolingual in English, city areas tend to be much more varied, and some areas have large minorities of one particular language. Research into how these different community situations affect school life is quite limited. However, Cline et. al. (2002) investigated educational factors that may be affecting minority ethnic pupils in mainly white UK schools. The findings most relevant to EAL provision were that no systems for supporting students with EAL were in place beyond the stages of learning basic English, and diversity issues were not prominent in staff training or the students' curriculum. There was no direct comparison between the prevalence of these issues in mainly white schools and more diverse schools, and only fourteen schools were investigated in detail. However, the research gives a flavour of how the level of diversity in the surrounding community may influence school life.

In summary, different views about minorities at a community or society level provide a context for understanding viewpoints about the education of students with EAL. Case studies of schools in areas with less diversity provide some evidence that this wider context can influence EAL provision.

2.2 Factors at the school level

2.2.1 The status of the languages and culture of bilingual students

2.2.1.1 Overall models of bilingual education

Different models of bilingual education are discussed here because they include differing views on the role of bilingual students' first languages. Before discussing the UK situation, it is worth discussing how education systems for bilingual students have been classified. The most important distinction has been made by Lambert (1975), who described additive and subtractive bilingualism. In the additive case, the aim is to develop both languages, while in a subtractive situation, one language replaces the other, with the ultimate aim being monolingualism.

An example of subtractive bilingual education would be a school where the syllabus was delivered in a majority language and assessments were made in this language.

Students entering the system speaking an alternative language would be supported to move from using their home language towards exclusive use of the majority language in school. In contrast, additive bilingual education entails development in both languages being valued, and content being learnt in both languages.

The most additive forms of bilingual education are most often found in areas where more than one language is spoken as a first language by large numbers of people. For example, much of the research has taken place in Spanish-English bilingual schools in the United States. Most research into the efficacy of additive bilingual education has found positive effects. For example, a major longitudinal US study has found that the longer students are educated in an additive environment, the better their long-term educational attainments (Ramirez, Yuen, & Ramey, 1991). Cummins' (1981) theory of Common Underlying Proficiency provides an explanation of why developing bilingually leads to benefits. It states that most abilities can be developed through either language, and can be learnt in one language and then displayed in another. This theory would therefore predict that the use of a student's first language in learning situations would be most useful where the learning objectives relate to prior learning which is currently more accessible through a first language.

In the UK students with EAL are most commonly educated through an environment which could be labelled as subtractive bilingualism. Almost all schools use a monolingual (English) curriculum, with support for the earliest stages of the learning of English. According to the typology of models of education for bilinguals developed by Baker (2006), this would be labelled either as mainstreaming or submersion. Skutnabb-Kangas (2000) has pointed out the importance of distinguishing submersion from the similar educational model of immersion, in which pupils whose first language is the majority language learn in a second language for the purpose of becoming bilingual voluntarily. Submersion involves a linguistic minority being educated in a majority language without choice in the matter.

Mainstreaming can involve withdrawal to classes specialising in instruction in the majority language. Separate specialist provision for students with EAL in the UK was more common until 1985 (Cable, Leung, & Vazquez, 2004), but the strongly integrationist Swann Report in this year argued in favour of earlier mainstreaming to prevent segregation and therefore discrimination (Department for Education, 1985). Since then, there has been a revival in the use of withdrawal, relabelled as induction (Office for Standards in Education, 2001). More recently, Cable et. al. (2004) found considerable variation in the extent to which schools used withdrawal/induction. Even if withdrawal is not used, pupils may receive support from a bilingual teaching assistant, and hopefully differentiation which reflects their abilities in all languages.

In the UK, additive bilingual schools have been used most often in Wales, where many children are educated in both Welsh and English (Baker, 1993), and in specialist schools for deaf children (Powers, 2001). The UK government has promoted a localised

education policy, with groups supposedly able to set up schools to suit local conditions (Department for Education, 2010). While there are valid concerns about inequality of provision, one effect may be that more children continue to develop their first language in school as well as learning English. This seems most likely in areas with a larger number of families from one language community, and such a model would be harder in an area with a wide variety of language communities.

Any system which encourages children to speak their own language rather than solely learn a majority language can be accused of increasing segregation between groups. This has been one of the main arguments used in favour of integration, and universal use of majority languages (i.e. English in the UK). Within education, separate schools, separate classrooms and separate activities within the classroom could all be viewed as segregation.

Skutnabb-Kangas (2000) has pointed out that keeping different groups together at all times may not lead to the least segregation. Where all students are taught in a majority language together with little attempt made towards inclusion, the disadvantage for linguistic minorities may be such that they are excluded from having a full opportunity to succeed in society. Linguistic groups would end up being segregated due to economic disadvantage.

Within recent UK government guidance (DfES, 2006), the overall strategy recommended is to aim for a model of bilingual education which is as additive as possible within the framework of students learning together in a predominantly English classroom. Compared to the US context, there is less direct evidence for the effectiveness of this model compared to alternatives. There is however, research on strategies for achieving an additive bilingualism environment within this model, which is discussed in subsequent sections.

2.2.1.2 Language use in a multilingual mainstream classroom

Most students with EAL in the UK are currently spending most of their school day in a classroom where the majority of teaching occurs in English. One arising issue is whether students should be allowed to speak in their first language in an English-medium class. Figure 1 shows a conversation about these issues, containing two common arguments about the use of other languages. Firstly, that the business of the class will be disturbed by the use of other languages, and secondly that the teacher loses control because she doesn't know what the children are talking about.

Figure 1: Three Punjabi-speaking Year 9 pupils are interviewed about a classroom experience. Reproduced from Mitchell & Brumfit (1997).

P: ... we got told off for speaking in Indian [sic] in class. The teacher said that it-other pupils would find it discouraging, and they don't like it (. . .) we're getting told off, and we've got to try and influence each other to talk in English.

Interviewer: Why do you think the teacher says that?

G: It's not like we shouted out in Indian (. . .)

P: We're not swearing or nothing, we're just talking, innit?

G: Yeah, just talking.

Interviewer: What, are you discussing your work then?

G: We just say, yeah, `could you pass the pen?' in Indian (. . .). I mean you know, they're accusing us of like . . . what is it?

P: Discouraging the children, and not knowing what we're talking about.

However research has supported the view of the Punjabi-speaking pupils in Mitchell & Brumfit's passage, that students use their home language to accomplish tasks which assist them in their learning. For example, Canagarajah (1995) found that students in Sri Lankan classrooms communicated with each other in their first language (without the teacher's approval) in order to explain things to each other to accelerate English learning. In a review of language use in bilingual classrooms, Martin-Jones (2000) identified many functions of switching between languages. These included signalling transitions in the lesson, constructing identities, and ensuring comprehension. Martin-Jones also discusses how students need to learn the unspoken rules for 'codeswitching', the practice of switching between languages during a sentence or conversation.

Even when using a variety of language is not officially allowed, there is evidence that a classroom can be multilingual in complex ways. Bourne (2001) observed a multilingual UK classroom using microphones to record peer-to-peer conversations, discovering a rich picture of language use. Children were aware that English was the official language of the classroom, but would move fluidly between languages which were used for different purposes. The privileged status of English was reflected in the ways that children used English to experiment with power relations.

There is a common belief among language teachers that the ideal language-learning environment only contains the target language. This has led to the popularity of exchange programmes, immersion models of bilingual education and 'English-only' rules in language classrooms. However, more recent research has indicated that even when English-language learning is the main aim, the selective use of students' first

language leads to better outcomes (Ramirez et al., 1991). The idea that all language teaching should take place in the target language has been labelled the 'maximum exposure fallacy' (Skuttnabb-Kangas, 2000). Phillipson (1992) has argued that the widespread belief in this fallacy is a result of linguistic imperialism, in the form of exporting language teaching as a lucrative industry.

The belief that only the majority language should be spoken in school may also be shared by language minority students. Agirdag (2010) found that Turkish students in a Belgian school agreed with the majority view that Turkish should not be spoken in class. Drawing on Bourdieu's (1977) idea of an orthodoxy that is imposed by the majority, Agdirag argues that the Turkish students have been influenced to express the view that monolingualism in Dutch is beneficial. None of the Dutch-speaking or Turkish-speaking participants in the study mentioned the benefits of being bilingual or speaking Turkish. In contrast, speaking European languages is valued within the school. Despite stating their agreement with the orthodoxy, the Turkish students covertly spoke their first language to each other outside class. These findings raise questions about the possibility of carrying out research where participants' statements are taken as evidence of their position. A person's stated views and their behaviour may tell a different story. Bourne (2001) also found evidence that students under-reported their use of their first language.

Bilingual students do better in schools where it is clear that their languages are valued. This was identified as a key factor in the success of bilingual students in six US high schools studied by Lucas, Henze & Donato (1990), through observations and interviews with staff and students. In these successful schools, students were encouraged to develop their own languages and were allowed to speak them unless practising English was an aim of a language lesson. Ideally schools should see students from every language community as a resource, and build on their experience in their first language to facilitate learning.

There is also evidence that teachers should encourage the use of both languages in the same task. One technique specific to bilingual students is translanguaging, where input for a task may be in one language, and output in the other. Williams (1996) (reported in Baker, 2006) found that this technique can have positive effects on both languages in a bilingual situation, and also on the learning of content. One reason for these benefits is hypothesised to be that learning content in two languages leads to a fuller understanding. It is not possible for students to simply repeat sentences from the text. A further advantage is that there is always part of a homework task that parents can help with.

2.2.1.3 The status of bilingual students' culture

As well as accepting a diversity of languages in the classroom, it has also been proposed that a variety of cultures should be represented. In their review of factors which increase the achievement of bilingual learners, Waxman & Tellez (2002) describe

'Culturally responsive instruction' as the practice of considering the cultures of all students when designing the curriculum and addressing student needs. Without this practice Waxman and Tellez argue that there is likely to be a mismatch between the cultural assumptions of school staff and the students they teach.

Darder and Upshur (1993) provide qualitative evidence that such a mismatch can in fact occur. They investigated four US schools through classroom observations, interviews and questionnaires, collecting information from pupils, parents, and school staff in various roles. Among their findings were that needs specific to Latino children were not identified by school administrators and Latino culture was not represented in the curriculum.

Osborne (1996) summarises ethnographic evidence of the benefits of teachers being sensitive to the cultures of their students. He found that culturally relevant teachers can raise the status of students' home cultures and teach students about these cultures. Students' first languages are used in school, and their families are involved in school life. Cultural assumptions for the schools are discussed with students and made explicit to them. Finally, the patterns of participation used in school reflect those which are common in the students' homes and communities.

Preparing for learning by activating prior knowledge is a common teaching technique based on constructivist ideas, but several authors have highlighted how this may present a different challenge for teachers of bilingual students. Students from different cultural backgrounds will have different knowledge bases through which to interpret new learning. Garcia (1991) investigated the reading performance of Hispanic children and those whose first language was English. While the Hispanic children did less well on a test of reading comprehension, once the effects of prior knowledge had been statistically controlled there was no difference. Qualitative evidence gathered in the same study indicated that the performance of Hispanic children was also impaired by cultural expectations about the nature of questions and task demands.

In a case study examining the practices of two successful teachers, Hornberger (1990) found that the teachers differed in their approaches to introducing prior knowledge. In the classroom where many students came from a Hispanic background, activated knowledge often related to Hispanic culture. In the more diverse classroom, prior knowledge was generally derived from the content of previous lessons. This illustrates that prior knowledge can be provided from different sources, but the research does not provide an evaluation of how effective these techniques were.

2.2.2 School policies for grouping and separating students

Bilingual students in English-speaking schools may be educated separately from their peers for two reasons, namely to develop ability in students' first language, and to develop ability in English. Minority language classes can be offered by schools, as reported by Mitchell and Brumfit (1997), who found Bengali classes taking place in one

of the three UK schools they studied. The class was used by most of the Bengali-speaking students in the school, but their opinions about the classes were not reported. Unfortunately for the status of the language, it was unlikely that students would enter GCSEs in a non-European language.

Cable et. al. (2004) reported on the varied use of 'withdrawal' or 'induction' classes within secondary schools to assist students with the learning of English. No students were consulted directly, but school staff generally reported that students were positive about the classes, mainly because they provided an opportunity to learn in English at a slower pace, and in a supportive environment. Only one school reported that students were negative about the classes. The study could be criticised for not consulting students directly, who may have had a different view.

Learning within groups in a cooperative learning paradigm appears to be especially beneficial for bilingual students. For example, Calderon, Hertz-Lazarowitz and Slavin (1998) carried out an experimental study to compare the effects of traditional methods and cooperative reading on students transitioning their reading skills from Spanish to English. They found benefits for both Spanish and English reading ability when groups worked together on tasks. However, Tellez & Waxman (2006) argue that such quantitative research may not fully reflect the complexity of the effects of cooperative relationships. They argue for a more extensive concept of 'communitarian learning' to replace the idea of setting cooperative learning tasks in the classroom. In a review of qualitative research, Tellez & Waxman found that a theme emerging from several ethnographic studies was that the building of a community that encourages dialogue between students is crucial for academic success. This provides an important view of what students will be missing if they take part in withdrawal classes.

2.2.3 Setting learning tasks at the right level

As with all students, a key factor for those who are bilingual is that teachers have high expectations for their achievement. Lucas et. al. (1990) found in a study of US schools that confidence in students can be communicated through systems such as advanced bilingual classes, a programme encouraging college applications for linguistic minorities and facilitating contact between school students and college graduates from minorities. The US schools studied by Mcleod (1996) all ensured that bilingual students were given challenging academic tasks requiring critical thinking and higher-order skills, rather than simple 'catch-up' work. Providing tasks in the first language is a crucial part in this to ensure that language skills in English do not act as a limit on expression or understanding.

A related point is that teachers need to distinguish between a child's language ability and other learning abilities in second-language tasks. Cummins (1981) distinguished between a child's ability to use language in context-embedded tasks and context-reduced tasks. An example of context-embedded language would be where language is being used to discuss visible events or stimuli. As a result of this distinction,

teaching strategies need to consider a task in two dimensions – the cognitive demands and the amount of context needed. The common danger for bilingual students is that as a result of a lower English language level the tasks offered to them will be too simple, resulting in frustration and boredom (Valdés, 1998). Proper differentiation can use contextual information to help make a task challenging without placing excessive demands on language. Considering these two dimensions can also provide a framework for distinguishing between Special Educational Needs (SEN) and difficulties with the level of English needed for a task.

Assessment methods for bilingual students need to take into account their achievements in both languages. Valdez Pierce & O'Malley (1992) present a portfolio-based assessment where students' work is collected and interpreted as an alternative to more traditional tests. This avoids the negative comparisons that may result from bilingual students being assessed on the same (English) tests as their peers, which could lead to lower self-esteem and expectations. While such practices have not been formally evaluated, they are based on well-established psychological principles.

2.2.4 Teaching techniques and resources for bilingual students

The phrase 'Instructional conversation' has been used to describe the technique of using extended discussion in class to facilitate learning (Waxman & Tellez, 2002). Instructional conversation is a commonly used pedagogical technique for all students, but has been especially advocated for bilingual students. Intuitively this seems to meet the needs of bilingual students, as more extended conversation will provide them with more language input to both learn the lesson content and develop English skills. Gibbons (2003) used a sociocultural framework to analyse how teachers move their students towards more complex language in a formal genre. Teachers can provide scaffolding for the next step in language use by repeating a student's ideas using more formal and less context-dependent language. Gibbons also found that teachers can point out to student speakers the need to provide a listener with more information during tasks in which students struggle with producing effective conversation without supportive context.

A few studies have provided tentative evidence for the effectiveness of instructional conversation specifically for bilingual students. However these studies have often been unpublished theses (Giacchino-Baker, 1992; Villar, 1999), and it seems that further published research is needed to establish that instructional conversation is especially helpful for bilingual students.

Providing multiple representations of meaning has been used to help students connect words they hear in a second language with their meaning. A common example used in language teaching is to present pictures or objects to show the meaning of unknown words. A number of studies have investigated the effects of using multiple representations in the classroom. For example, through research in a mixed-methods paradigm, Tang (1992) found that providing visual representation of the connection

between ideas facilitated comprehension. This was supported by student opinions on the intervention, which were generally positive. Working with college level students learning French, Jones and Plass (2002) identified experimentally that listening comprehension and vocabulary acquisition is improved when students can see both textual and pictorial supporting information. As there is supportive evidence for the use of multiple representations and it seems intuitively to be very helpful for bilingual students, it is unsurprising that these techniques feature in UK government guidance (DfES, 2006).

A number of interventions which use ICT to support bilingual students have been evaluated through research. Walker De Felix, Johnson & Shick (1990) reported preliminary results where students were highly engaged and motivated in ICT-based science lessons in US schools. Also working the US, Chavez (1990) evaluated ICT-based reading and writing materials through qualitative methods, finding that students enjoyed the resources and were on-task for a large percentage of the time. However there was no comparison made between equivalent non-ICT materials for similar students. The use of ICT is especially hard to evaluate due to the confounding of the use of ICT with other variables. For example, in many studies the use of ICT is confounded with working in groups. Bearing in mind the probable beneficial effects of cooperative learning it may be that this factor is leading to higher engagement. Similarly, ICT programmes commonly involve multiple representations of information, which has also been discussed above as beneficial for bilingual students. Overall it seems that more rigorous research is required to ascertain that learning through ICT is especially beneficial for bilingual students.

The more complex teaching and assessment methods required for bilingual students clearly have an impact on the training needs for their teachers. Villarreal (1999) identifies knowledge of the specific needs of bilingual pupils as a key feature of successful provision. While the impact of this is hard to quantify through research evidence, it is hard to argue against.

2.2.5 Support for bilingual students' social experiences

The *Excellence and Enjoyment* government materials (DfES, 2006) emphasise the need for students with EAL to feel valued and have a sense of belonging, drawing on Maslow's theory of a hierarchy of needs. The materials suggest that a sense of belonging is promoted by some of the factors identified in Blair and Bourne's (1998) analysis of successful UK schools. Specifically, a curriculum which is culturally inclusive, a willingness to involve minority communities and families and a policy for combating racism can be helpful. Employing staff from minority backgrounds, and teachers modelling positive attitudes to equality are also recommended. While the research base for these ideas is not explicitly mentioned, they are based on well-accepted psychological principles of social learning through modelling.

The *Excellence and Enjoyment* materials also recommend that a sense of all linguistic

groups being valued can be engendered by displaying different languages around the school (DfES, 2006).

2.2.6 School Ethos

In her US study mentioned earlier, McLeod (1996) also studied the ethos of schools exemplifying good practice with bilingual students. She found that a key feature in all of these schools was that the programme for bilingual students was an integrated part of the school, rather than being an add-on. The schools managed to include separate classes to provide first language development, but students were fully integrated through mixed lessons in certain subjects, and a 'house' or 'family' system to encourage students to identify with a multilingual group.

2.2.7 Summary of school level factors

Research evidence from a wide variety of paradigms exists as a guide to the strategies that schools should be putting into place for bilingual students. In some areas the conclusions that can be drawn are still quite tentative, as for some factors a limited amount of published research exists. In some cases the research consists of observational research of successful schools in the form of case studies. Such research could be taken further by studying the process of introducing new practices in order to change outcomes in schools.

In addition, much of the published research comes from a US context, where the model of bilingual education can be quite different to the UK situation. There is a need for further study of how school-level strategies can be applied to schools with several small linguistic minorities or predominantly English-speaking schools.

2.3 Family systems

Perhaps the most reliable research finding about a bilingual student's home environment is the benefit of the family speaking in their first language at home. This ensures development of the student's first language, which as discussed earlier has great benefit for academic progress and learning a second language (Cummins, 1981).

An important feature of successful schooling for bilingual students is the quality of liaison between school and family. Blair and Bourne (1998) found in their case study of schools with successful EAL provision that all of the schools involved listened carefully to parents of students with EAL. In the US, Robledo Montecel (1993) interviewed Hispanic parents and schools about family-school relations, finding that successful schools are characterised by a wish to get parents fully involved rather than just seeing them as helpers. Schools can work together with families to secure resources.

Members of the extended family may be playing a specific role in the education of bilingual students. Kenner, Gregory, Jessel, Ruby and Arju (2007) analysed through

interviews and video recordings how Bangladeshi grandparents in London supported their grandchildren's learning in a way which complemented the role of teachers and parents. In particular, grandparents provided mediation for academic tasks, enabling the grandchild to achieve more.

Family members provide a rich source of information for assessment of the student's learning needs. In the governmental guidance 'Aiming High' (Department for Education and Skills, 2005), schools are encouraged to gain information about the student's capabilities in all the languages that they use, how they use these languages and the nature of these languages (e.g. do they have a written form).

2.4 Individual differences

The *Excellence and Enjoyment* materials draw on the model of inclusion through personalising learning that formed part of the Primary National Strategy at that time (DfES, 2006). According to this model, teaching practice should personalise learning through "setting suitable learning challenges", "responding to pupils' diverse needs" and "overcoming potential barriers to learning" (p. 3 Introductory Guide). Case studies of schools with successful bilingual students support this strategy, finding that these schools try to account for individual differences by taking a holistic view of each child (Blair & Bourne, 1998).

2.4.1 Cultural identification

One relevant individual difference is how students with EAL in UK schools relate to different cultures. Among many possible options for cultural identification, there is the local majority culture (e.g. Welsh, Yorkshire, London) and a minority culture that the student is familiar with because of their background. Language is a major factor in an individual's self-concept or sense of belonging to particular groups.

Berry (1990) proposed a two-dimensional taxonomy of individuals who have experienced two different cultures. Individuals may identify to a greater or lesser extent with their original culture (dimension one), and a greater or lesser extent with a new culture (dimension two). Classifying individuals as high or low on each of these dimensions results in four possible two-dimensional classifications. Later research has found evidence that this bidimensional model is predictive of personality and psychosocial adjustment (Ryder, Alden, & Paulhus, 2000).

Much of the research on living with two different cultures is qualitative, with individuals describing their experience in detail. Drawing on this, Benet-Martinez, Leu, Lee and Morris (2002) identified the construct of Bicultural Identity Integration (BII), to be used alongside measures of how much individuals identified with different cultures. They outline the concept by describing a contrast: "Although some biculturals perceive their cultural identities as compatible and complementary, others tend to describe them as oppositional and contradictory." (Benet-Martinez et. al., p. 493). These

researchers found that BII has an effect on how people's use of different cultural identities can be cued by the environment (known as cultural code-switching). They found that high BII individuals are likely to alter their behaviour to make it consistent with environmental cues. For example, cues to Chinese culture would make Chinese Americans act more according to Chinese cultural norms. They found that participants with low BII would react against these cues, for example by following American cultural norms after Chinese cues. While the reasons for this finding are unclear, it is likely to have significance for practitioners who seek to make schools more inclusive through introducing cues to different cultures. While some individuals are happy to be led in this way to accessing different parts of their identity, some others may reject it.

Benet-Martinez & Haritatos (2005) further explored the concept of BII by identifying within it separate constructs of "distance" and "conflict". They found that cultural conflict seemed to be more related to the affective elements of being bicultural. Cultural distance was found to capture the attitudes about each culture, ideology about managing biculturalism, and self-definition as distinctively belonging to a cultural group. This more fine-grained conception of BII may help teachers and other professionals reflect on situations within their schools.

Issues of cultural identity may be different for young people who have emigrated compared to those who have always lived as part of a minority culture in a country. Cockburn (2002) discusses the school experience of 'Third Culture Kids', defined as a child or young person who has moved into a foreign culture with their parents. Based on her experiences working with 'Third Culture Kids', Cockburn claims that their strongest sense of belonging may be with others with similar experiences of migration, rather than their parents' culture of the culture they are residing in. She also points out that students who have moved away from everything they know in one country have experienced a significant loss, and may therefore have a greater need for security and control. It seems worthwhile for school staff to reflect carefully on the specific needs of 'Third Culture Kids' in their schools.

2.4.2 Differences in ability levels

Although beneficial effects of bilingualism have generally been found, this is likely to be mediated by a student's proficiency in the languages. This 'Thresholds Theory' was first postulated by Cummins (1976), who suggested that children will only derive cognitive benefits from bilingualism if they reach a certain level in their first language. There is also a second, lower threshold, below which bilingualism can have a negative effect, because the individual does not have high enough proficiency in either language. Baker (2006) summarises some empirical support for Thresholds Theory, which shows that the benefits of bilingualism depend on both cognitive abilities and levels of academic achievement. He also points out that one problem with the theory is the difficulty of precisely identifying the thresholds. In the current study, the relevance of Thresholds Theory is that children may have more positive attitudes to a bilingual education if their academic achievement and cognitive level are high.

2.5 Presence of student opinions within the literature

Within the literature as a whole, there is fairly little research where the main focus is on the opinions of bilingual students about the support they value. With some exceptions (e.g. Agirdag, 2010), when student opinions are included in research they tend to be mentioned as minor points within case studies. As an example, a collection of case studies of secondary schools where students with EAL do well (Office for Standards in Education, 2004) assigned 2 out of 52 pages to pupil views, and did not state how analysis or selection of quotes took place. Where student opinions are found in the literature, they tend to be presented as a collective, with little attention paid to variation in opinions.

Taking into account the views of students is considered to be of great value for several reasons which are discussed by Harding and Atkinson (2009). Firstly, the right of young people to be involved in decisions about their education is gaining more recognition. Educational provision which is based on young people's preferences and how they perceive their environment is also likely to be more effective. Finally, young people feel more motivated and have feelings of control and independence if they are educated in environments where their views are taken into account. Bearing these factors in mind, it seems that further research is needed into the views of students with EAL and methods by which these views can be gained.

2.6 Summary

A wide variety of research methods has been used to study the education of bilingual students. One of the most popular has been the qualitative evaluation of 'model' schools (e.g. Lucas et. al. ,1990). While such research provides useful ideas for school improvement, it is hard to separate the impact of different practices. Some aspects may also be the results of well-functioning schools rather than the causes. In addition, there are experimental studies (e.g. Calderon et al., 1998) which have evaluated educational approaches through manipulating variables. It is also very common to find within the literature recommendations for positive features of schools which are not based on specific evidence but rather accumulated experience.

A possible criticism of much of the literature is that it is based on US schools, often with a very large student population coming from one language community. The situation in the UK is usually very different, with many schools being home to a number of languages.

One avenue for further investigation is a more detailed examination of the opinions of students with EAL about the strategies which are put in place to help them and are often highly visible to them. While much of the existing research seeks to find generalities in answering the question of what works best, it is also valuable to explore different ways that students respond to their schools. This study aims to use Q

methodology to highlight any individual differences and uncover a range of shared viewpoints on education for students with EAL.

2.7 Research Question

Based on the literature review and the identified needs for further research, the research question for this study is:

> What are the viewpoints of students with EAL towards strategies that can be used to help them by adults in school?

3. Methodology

3.1 Overview of Q Methodology

The research methodology used in the current study is Q methodology (Stephenson, 1936). Many variants of the methodology have been used, but elements common to all uses are as follows:

- The researcher creates a set of items (the Q set). Each item corresponds to an opinion about the topic under consideration, and is rateable by individuals. The items are usually statements, with individuals able to say how much they like or agree with the statement.
- A number of participants (the P set) are asked to give a rating to each item in the Q set by placing it in a grid, with each column representing a discrete numerical rating of the item. There are as many spaces in the grid as there are items, so the number of items that can be given any particular rating is fixed. As a result of this process, the participant has assigned a numerical value to each item.
- Each participant's response to the Q set can be represented as the numerical values assigned to the items. Commonalities between these responses are discovered through a statistical analysis of the correlations between responses. This can be termed a 'by subject' analysis. It produces very different results to a 'by variable' analysis, which is based on correlations between variables, such as items on a questionnaire. 'By variable' analysis is commonly known as R-methodology.
- Through the analysis, groups of participants who respond in a similar way (showing a similar viewpoint) are identified. The way that each group arranges the Q set is interpreted to generate a textual description of the viewpoint.
- With its use of textual statements, textual output and interpretation, Q methodology shares some elements of qualitative research paradigms. However the use of statistical analysis is clearly quantitative. Hence Q methodology has been termed qualiquantilogical (Watts & Stenner, 2005).

Later in Chapter 3 I will describe the methodology in more detail, using the current study as the main example. The methodological choices and specific way in which I have used Q methodology will also be outlined.

3.2 Overall philosophical position

Before a more thoroughgoing description of Q methodology, I have included a description of the overall philosophical position which underlies this study, as philosophical considerations will be referred to repeatedly during the description of the methodology.

3.2.1 Defining philosophical terms (Ontology, Epistemology, Methodology)

It is worth defining what I mean by terms which refer to different branches of philosophy, as these are used in varying ways in the literature.

My use of the first term, 'ontology', follows the *Stanford Encyclopaedia of Philosophy's* rough definition: "As a first approximation, ontology is the study of what there is" (Hofweber, 2012, online). It therefore concerns such questions as whether an external reality exists beyond our understanding of it, and in what sense properties (e.g. redness, goodness) exist.

The second term, 'epistemology', has been defined as "The philosophical theory of knowledge, which seeks to define it, distinguish its principal varieties, identify its sources, and establish its limits." (Quinton, 1977, p.209). Questions asked within epistemology would therefore include 'What does it mean to know something?', and 'On what basis can we say we know something?'.

The third term, 'methodology' has been defined by Schwandt (2001, p.71) as the "analysis of the assumptions, principles, and procedures in a particular approach to inquiry". I have chosen this definition because it is relatively inclusive, in contrast with some definitions which privilege the practices of 'scientific' inquiry above other ways in which people reach understandings. This relates to the reason why I chose a definition of epistemology which did not include the study of the methods of furthering knowledge. When this is included within epistemology, it tends to concern more informal reasoning and investigation, with formal science left to 'methodology'. I prefer to see the two as continuous, and therefore to include them in the same category (methodology).

3.2.2 Critical Realism

The overall philosophical position underlying the study can be described as critical realism. In order to clarify this position, it is worthwhile to consider the more extreme positions of naïve realism and radical relativism. Scott (2000) summarises the distinctions Bhaskar (1979) makes between them as follows. Naïve realism's ontological position is that things exist as we sense them, and therefore the related epistemological position is that we find out about the world by neutral observation of these facts. In contrast, radical relativism argues that people's personal constructions (in thought and public discourse) are the only reality there is. According to this view it is misguided to appeal to an external objective reality to determine whether constructions are true or false. Rather, it is through power relations in society that certain constructions become dominant. Therefore the only 'truth' that exists is an individual or group's own truth, which reflects their agenda.

Bhaskar (1979) argues that both naïve realism and radical relativism collapse epistemology and ontology into one. According to a naïve realist, what exists

determines what we know, whereas for a radical relativist, what we know determines what exists. Critical realism is a middle ground between these two positions where epistemology and ontology are more separate. Epistemology, according to this view, is subject to personal interpretations and can be influenced by social relations of power. However, thinking ontologically, there is an underlying reality which can remain the same even when it is constructed differently by different individuals or by the same individual at different times.

Applying critical realism to the current study, I believe that some strategies for supporting students with EAL have a real positive or negative impact in comparison to other strategies. The discourse about these strategies is made up of interpreted constructions of reality. The acceptability of these constructions depends on both the constraints of reality and prevailing personal and social factors. In contrast, a relativist social constructionist position would advocate that we have access to the discourse which constructs the topic of supporting students with EAL, but not to a reality underlying the discourse. This discourse would be determined by power relations and group interests, rather than correspondence to an external reality. At the other extreme a naïve realist position would see the statements about teaching strategies as straightforward descriptions of reality.

3.2.3 Social Constructionism

The current study is also influenced by ideas which can be called social constructionist. While there are many versions of social constructionism, a common feature of such theories is that ways of talking and thinking about the world are shared and developed socially. The connection with Q methodology arises when the P set comprises multiple participants, and factor analysis is used to identify groups of people who have a similar viewpoint. Social constructionism provides an explanation of why similar viewpoints are held by groups of participants - because ways of talking and thinking about a topic are developed jointly in social groups (Watts & Stenner, 2012).

Some versions of social constructionism are in direct contradiction with the critical realism position mentioned earlier, as they involve a relativist position which criticises any comparison between discourse and an external reality (Potter & Wetherell, 1987). However, Cromby and Nightingale (1999) discuss how social constructionism covers a wide variety of positions, some of which have a realist ontology. My position is that socially shared discourses are as real as any other concepts we use by virtue of the fact that they help us to understand and predict the world around us. The realist aspect of this position means that saying a person uses particular social constructions is a statement about an external reality. The statement could be judged to be true or false on the basis of evidence, and someone could make the statement and then later decide that they were mistaken. An example might occur if someone expressed a viewpoint but then later admitted they had been lying. The critical aspect of this position means that interpretation is involved in both the everyday use of social constructions and the process of exploring the social constructions people use (e.g. in

this research). In both cases personal interest will affect the choice of interpretations.

I am also not claiming that social constructions or viewpoints are entities which should be conceived as distinct from physical bodies, as has been suggested (Watts, 2008). Such an ontological position can be labelled as 'dualist' as it is argued that two different types of entities exist (physical and semantic in this case). Rather than adopting a dualist position the current study is based on a monist ontological position, which claims that reality is made up of one type of entity (see Davidson (1980) for an example of an exposition of a monist ontological account). Within a monist position, the apparent existence of psychological and physical matter can be accounted for by arguing that the same events can be described in different ways, for example in psychological and physical terms. In the context of viewpoints identified by a Q methodology study, these viewpoints are generally described in psychological terms, but are instantiated in people and events which are also describable in physical terms. A full description of a monist ontological account would be well beyond the scope of this research, and for a fuller description the reader can refer to Davidson (1980).

Using a social constructionist perspective to carry out a Q study has implications for the way that subjectivity is conceptualised. Subjectivity has always been a central concept in the theoretical background to Q methodology, but it can be thought of in different ways, as discussed by Wolf (2009). Watts and Stenner (2012) describe how Stephenson's original construction of subjectivity was surprisingly consistent with the prevailing behaviourist point of view of the time. By describing subjectivity as 'operant', meaning a behavioural response, Stephenson seemed to imply that this subjectivity was nothing more than the behaviour elicited by the Q sorting situation. The behaviour is subjective because the participant sorts the items according to his own individual point of view. According to this theory, to say that a person holds a viewpoint is to say that they have a behavioural disposition to respond in a certain way to the items of the Q set (Wolf, 2009). Q studies based on this idea of subjectivity can often take place with only one participant, with the emphasis being on the structure of the participant's viewpoint.

According to social constructionist theory the viewpoints identified by Q methodology have a very different status. Rather than being an individual's personal reaction to the Q set, the viewpoints reflect shared social meanings. Specifically, the viewpoints will be constituted from social constructions which exist in the participant's social environment and are endorsed by the participant (Wolf, 2009). As shared viewpoints are found, social constructions endorsed by groups of individuals are found. Q studies with a social constructionist underpinning require a number of participants which is large enough to detect viewpoints which are shared by groups of people.

Another concept which Stephenson has used extensively in speaking of Q methodology is that of the concourse surrounding a topic. In Brown (1993, p. 94), concourse is defined as "the flow of communicability surrounding any topic", and it is from the

concourse that statements making up the Q set are taken. Social constructionist theory also includes the idea that linguistic resources are available in social groups, but places more emphasis on the active ways that groups develop constructions to suit their own purposes.

3.2.4 Abduction

In making inferences about participants' viewpoints, Q methodology makes extensive use of abduction (Goldman, 1990). This form of reasoning was first discussed systematically by Charles Sanders Pierce, and can be described as 'inference to the best explanation'. Examples of abduction usually begin with a phenomenon which is surprising or needs an explanation. The process of abduction utilises background information and information about the phenomenon to be explained to infer what might be the most likely explanation for the phenomenon. For example, someone finding a pile of feathers in her garden might use their knowledge that birds and cats were often present in the garden to infer that a cat had caught a bird. Abduction is relevant to Q methodology because during data analysis it is necessary to decide between interpretations which explain regularities and variance in the data. Abduction can be thought of as choosing one of a number of competing explanations which are consistent with both the observed evidence and theoretical understanding.

3.3 Theory of Q Methodology

3.3.1 Overview of the current study

This study proceeded in several stages, and the schedule for these is shown in Table 1 below.

Table 1: Stages of the Study

Initial piloting work with an early Q set based on my initial literature review. This was used mainly to assess the viability of the methodology for participants with EAL.	February 2012
Focus groups used to generate items for the Q set.	June-July 2012
Further literature review used to generate items for the Q set.	July-September 2012
Discussions with EAL professionals used to check for items missing from the Q set and assess the balance of items in the Q set.	July-August 2012
Piloting the Q set.	September 2012
Collection of data through Q sorts.	November 2012 – January 2013

3.3.2 Creation of the Q set

3.3.2.1 Sampling methods for Q sets

As mentioned earlier, a Q set is a collection of items that participants in the study are able to rate according to a dimension given by the researcher. The Q set can be produced through a number of methods, which are divided by McKeown and Thomas (1988) into "naturalistic" and "ready-made" sampling methods. When fully naturalistic sampling is used, the Q set consists of statements which are selected from the discourse of the participants who perform the Q sorting. For example, participants may originally talk about a topic in an interview, and then perform Q sorts made up of statements derived from the interviews.

Where ready-made sampling is used, the Q set items come from a source other than the participants' own discourse. According to McKeown and Thomas (1988), a common example of a ready-made sample is a "Quasi-naturalistic Q-Sample", where statements are selected from texts about the topic, but the authors of these texts are not the participants in the study. There are also Q samples based on standardised scales, and sometimes standardised Q samples are used in identical form but for different purposes in different studies.

McKeown and Thomas' (1988) second distinction between Q sampling techniques contrasts structured and unstructured Q sets. In producing a structured Q set, the researcher decides on a number of themes, and then ensures that each theme is represented. There may even be a requirement that an equal number of statements are included in each theme, as shown in the example described in Brown (1993). In contrast, an unstructured Q set does not use themes, and considers each statement on its own merit.

Whatever sampling technique is used, the main aim in creating the Q set is to represent ideas existing in the concourse about a topic. Ideally, the participants performing the Q sorting procedure should feel that the Q set provides them with sufficient options to express their viewpoint.

Curt (1994) (as cited in Watts & Stenner, 2012) discusses three types of Q set items which should not be mixed together. The first of these, "representations of a subject matter", concerns the typical ways that a topic is constructed within a social group. A second type of item, "understandings", is more concerned with a personal viewpoint on the topic. Finally, items related to "conduct" invite participants to express a viewpoint on what things should be done in a situation. Curt advises that any Q set should contain items of only one of these types.

3.3.2.2 Sampling methods in the current study

In the current study I decided to use a hybrid-sampling technique (incorporating aspects of naturalistic and ready-made samples), by using some statements which were derived from conversations with the participants, and some statements derived from other discourse. According to Curt's (1994) typology the items are "conduct" items as I wish to find the participants' viewpoints on what adults should be doing.

The primary method of finding items for the Q set was through focus groups with young people (providing a naturalistic aspect of the hybrid sample). I considered this sampling technique to be the most important because the main aim of the study was to provide a channel for students with EAL to express their viewpoints. Two focus groups were carried out, one with pupils in National Curriculum (NC) Years 5 and 6 in a primary school, and one with pupils in NC Years 7 to 10 in a secondary school. These two different age groups were selected to cover a wide age range of participants.

The focus groups were carried out in a room in the participants' school. As well as myself, a colleague working as an Assistant Educational Psychologist was also present, taking notes on the nonverbal behaviour of the participants and also on the extent to which I may have been leading the group towards particular answers. An audio recording was made of each focus group.

As a stimulus question to begin each focus group, I asked participants for ideas for ways that adults in school could help learners with EAL. Based on my prior literature review, I also had a number of prompts to ensure that broad topic areas were covered. These prompts are shown in Figure 2 on the following page.

During the focus group it was sometimes difficult to initially be sure of the idea being put across by the participant, due to their age and level of English proficiency. In these situations some clarification was needed, which normally occurred through another participant contributing to the idea or me asking questions to clarify. Another issue was that often participants would give an idea which was very specific. In this case a more general idea needed to be negotiated with participants to cover this.

According to Watts and Stenner (2012), one of the main criteria for an effective Q set is the coverage of the topic area. If this criterion is not met successfully, the participants undertaking a Q sort find that certain aspects of their viewpoint cannot be expressed due to statements not being included. In order to improve coverage, I compared the focus group ideas with a literature review. Using McKeown and Thomas' (1988) terminology, this led to a ready-made part of my hybrid sample. As the existing literature on EAL provision is extremely large, an exhaustive search was not possible. Instead I included documents which covered three areas – academic texts, government guidance and professional guidance. The texts in Figure 3 below were read in their entirety. In addition, the ideas in my Q set were influenced by a large number of texts which I have read more selectively, and would be difficult to list here comprehensively.

Figure 2: Prompts for focus groups

What helps you to understand?
What helps you with speaking and discussions?
What helps you with your writing?
What helps you with reading?
What helps you with listening?
What helps you with speaking English?
What helps you with maths?
What helps you with science?
What helps bilingual students to learn other subjects?
Have you ever been taken outside class to learn more English?

- What do you think about that?

How much do you use your family's first language at school?

- What do you think about that?

Do you do activities in groups in class?

- What language do you speak in groups?

How can teachers make all students feel welcome in class, no matter what language they speak?
Does your school get your parents involved in school life?

Figure 3: Main sources of ideas for the Q set

<u>Academic texts</u>
Language Power and Pedagogy (Cummins, 2000).
Research Synthesis on Effective Teaching Practices for English Language Learners (Waxman & Tellez, 2002).

<u>Government guidance</u>
Ensuring the attainment of more advanced learners of English as an Additional Language (Department for Education and Skills, 2009).
Excellence and Enjoyment: learning and teaching for bilingual children in the primary years (DfES, 2006).

<u>Professional guidance</u>
The distinctiveness of EAL, a cross-curriculum discipline (South, 1999).

Towards the end of this literature review I was finding very few additional items, indicating that the population of potential statements had been fully sampled. This point where further inquiry leads to no novel findings has been called the 'saturation point' in qualitative research (Bowen, 2008).

As a final source of items I consulted professionals within the field. I firstly approached

a team within my local authority who work on a consultancy basis with schools to improve provision for students with EAL. I also approached an educational psychologist with a specialised interest in EAL who works part-time in a university, in an attempt to gain an academic perspective. All of these professionals discussed my draft Q set and suggested additions or alterations.

My original intention had been to quote focus group participants, EAL professionals and the literature directly in items of the Q set. This would have followed the advice of Brown (1980), who advocates changing the source of each item as little as possible. However when carrying out the study I found that it was very difficult to use quotes in this way, as many ideas I found in the concourse were very specific and sometimes technical. In the Q set I needed statements to be more general to attain coverage of the topic area while limiting the statements to a suitable number. I also wanted to use the guidelines suggested by Watts and Stenner (2012) for generating suitable items for the Q set. These authors state that each item should contain a single idea, and should not contain negatives and qualifications. In addition items should be of similar length and begin with the same prefix where possible. If I had taken direct quotes as my items then it would not have been possible to adhere to these guidelines. Instead the items I used in the Q set were based as much as possible on statements from the concourse, but all had to be adapted to some extent.

Within the present study, I decided against a structured Q set, mainly because I wanted to obtain statements from participants and I felt that an a priori structure could be limiting. However, I did use the research literature to obtain a number of prompts that were given to participants in focus groups.

3.3.2.3 Refining the Q sample

Once a group of 60 statements had been finalised, these were piloted in two schools with 4 students aged between 10 and 15. The main aims of this pilot were to ensure that the participants were able to understand the statements and that they were able to understand the task.

This pilot led to me reducing the number of items in the Q set to 46, as a larger number seemed to be quite a difficult task for younger children. In addition, based on the conversations with participants I made some changes to the numbers of items covering each area. Firstly, I increased the proportion of items which related to adults showing a positive attitude towards bilingualism. Secondly, I decreased the proportion of items which referred to specific teaching strategies, as these sometimes had little meaning for younger participants. The participants involved in piloting work were not able to suggest any additions to the Q set, which could be taken as evidence that it was already fairly comprehensive. These participants also told me that the meaning of the items was clear, possibly as a result of my joint work with EAL professionals to improve the wording of some items.

One difficult issue in the wording of the statements was to find a term which refers to the group of students relevant to the study. Among the possible options were 'EAL students', 'bilingual students' and 'students who are learning English as a second language'. Of these I felt that 'EAL students' would be hard to explain, and that the final option would be too long for easily comprehendible statements. While the term 'bilingual student' was used in the statements, it is acknowledged that there is considerable ambiguity about this term. It can be used to designate someone who is already proficient in two languages, and on a strict interpretation those who speak three or more languages are excluded. In order to resolve these issues an explanation of the term 'bilingual' was given on the instruction sheet (see Appendix A), and I held a short discussion with participants about the meaning of the term. After this discussion I asked questions about the concepts of 'bilingual' and 'monolingual', and through these questions I was able to ensure that all participants included in this study had understood this term.

Each item in the Q set was assigned a random number to ensure that items with a similar meaning could not be placed together purely because they had been assigned a similar number. The order in which the participants would see the cards was also randomised.

3.3.2.4 Status of the Q set

It is important to acknowledge that the meaning of the Q set items is not fixed, but rather each one will be interpreted by the participants, and therefore have a personal meaning for that participant. This personal meaning will be determined by how the item relates to the participant's own experience of the concourse (Wolf, 2009).

3.3.3 Selection of Participants (the P set)

3.3.3.1 Criteria for participant selection

McKeown and Thomas (1988) describe 'theoretical sampling' as choosing participants based on them having a relevant connection to the topic. Watts and Stenner (2012) seem to have a similar idea in mind when they use the term 'strategic sampling', and advise Q researchers to choose participants who will have something important to say about the topic at hand. As the main aim of the current study is to uncover a variety of viewpoints present in the population of students with EAL, it is important that the sample is as varied as possible in terms of factors such as age, linguistic background, gender and education history. However, it is not necessary to ensure that the sample is representative of the general population. For example if 10 per cent of the population are Chinese speakers, it is important that some participants are Chinese, but not that 10 per cent of the participants are Chinese. One limit on the variety of the sample was that pilot work indicated that all participants needed to have attained Stage 3 of 4 for EAL proficiency, according to the county's assessment framework. This was necessary to ensure that participants could understand the Q set independently. Descriptions of

Stages 3 and 4 are shown in Appendix B.

3.3.3.2 Finding participants

Participants were found by contacting Special Educational Needs Coordinators (SENCos) or EAL Coordinators in schools. For the earlier schools I contacted, I asked for all students meeting the basic criteria (age and English competence) to be included. For later schools, I requested particular groups of participants to ensure variety in the P set.

A survey of the literature reveals fairly little agreement about how to decide on an appropriate number of participants. One point of agreement, exemplified by Brown (1980) is that ascertaining the existence of different viewpoints and comparing them can be achieved with a fairly small number of participants. According to Brown, it is generally found that as participants are added, a point is quite quickly reached where no further useful information is gained. Indeed, Q studies can be criticised on the grounds that they have more participants than items in the Q set (Watts & Stenner, 2012). One important point is that a low number of participants limits the number of factors that can emerge. In the current study one of my main aims is for multiple viewpoints to emerge, and so the number of participants used needs to be high enough for this to occur.

No firm decision on the number of participants was made prior to data collection, and I decided to make an ad hoc decision based on the data obtained. Further information about deciding on the appropriate number of participants, along with information on the composition of the P Set, will be provided in Section 4.1.

3.3.3.3 Pre-sorting information about participants

Information was initially gathered from the participants themselves, with gaps filled in by asking EAL coordinators, and consulting publicly available information for the level of diversity in the school. In the spirit of Q methodology, this information was kept as rich as possible (Watts & Stenner, 2012), and comprised the following:

- National Curriculum Year Group
- Gender
- Stage of EAL proficiency
- Time learning English
- Time spent living in the UK
- First language
- Level of language diversity in participant's school, as measured by percentage of pupils having EAL (as I was interested in whether this would affect a participant's viewpoint.)

3.3.4 Q sorting

During a Q sort, participants are given the Q set items, and place them in a grid to show their relative opinion of the items. This requires a condition of instruction, which

instructs the participants how to rank the items. For example, in the current study, the condition of instruction was:

“Adults do many things to help bilingual students at school. Please look at these ideas. Put them in columns to show how helpful or unhelpful you think they are. Make the same shape as the grey grid.”

The grid also has labels on each side for the opposite poles of the condition of instruction. In the case of the current study, the poles were ‘Most unhelpful’ on the left and ‘Most helpful’ on the right. Two labels with the prefix ‘most’ are thought to be more suitable that ‘most’ and ‘least’ as the two ends of the grid are often populated by items eliciting strong feelings (Watts & Stenner, 2012).

Participants place the items into the columns of the grid to show their relative rating of the items according to the condition of instruction. It is important to note that the ratings are relative to other items in the Q set (Watts & Stenner, 2012). For example, an item placed in the furthest left column is being ranked as less helpful than one in the adjacent column. However, this is a relative judgment between the two items, and the participants may think that both items are helpful or unhelpful. For these reasons the completed Q sort must be interpreted holistically as a total response. The placement of any individual card has no meaning on its own. During the procedure, this point needed to be explained to several participants, who were uncomfortable with placing moderately helpful strategies on the unhelpful side of the grid.

In the current study, participants performed the Q sorting procedure within school in small groups, usually of two participants. They were initially asked to look at the group of 46 statements and sort them into 5 piles – ‘Really unhelpful’, ‘Slightly unhelpful’, ‘Not unhelpful, not helpful, ‘Slightly helpful’ and ‘Really helpful’ (see Appendix C). This approach was taken to ensure that participants had a rough idea of the proportion of the Q grid which would be taken up by statements from each group. My initial pilot had shown that participants tend to initially fill up the helpful side of the grid, and then place later statements on the unhelpful side. Participants were told that the number of statements in each pile did not have to be the same. Instructions for this stage of the Q sorting task are found on the first page of Appendix A.

After sorting statements into 5 piles, participants were asked to place the statements in a grid, to indicate their opinion of how helpful the strategies are for students with EAL. There were 46 spaces in the grid (shown in Appendix D), to match the number of statements provided. Watts and Stenner (2012) state that the grid should be roughly the shape of a normal distribution, but that the exact shape of the distribution has little effect on the results. The number of columns (11) follows the advice of Brown (1980) on how ‘deep’ or ‘shallow’ a distribution should be. Too many columns can present the participants with too many decisions, while too few can be restrictive. Brown (1980) also gives advice on steep and flat distributions, meaning the extent to

which items are bunched towards the middle (steep) or spread more evenly across columns (flat). The present study has participants who are not experts on all of the items, and may be unfamiliar with some of the strategies. According to Brown, such a situation motivates a steeper distribution, and accordingly only two items were placed in the most extreme columns, as can be seen in Appendix D.

Participants were asked to fill in the grid from both sides, one column at a time, starting with the most helpful and most unhelpful strategies, until they reached the middle (see second page of Appendix A for instructions). Participants were reminded that they could ask questions about the meaning of cards as they filled in the grid. As the participants were completing the grid, I asked them questions to check that they understood the task (e.g. 'which do you think are more helpful, ones in column 4 or ones in column 5'.) Feedback was given about the participants' understanding of the task, but not about the placement of the items. During the Q sorting process participants were often reminded that they could change the position of the cards.

All Q set items were written on laminated cards, to make sorting and rearranging easier. The column headings were printed on a strip of paper to run along the top of the Q sort, and the condition of instruction was in full view above the column headings at all times.

In the initial pilot, numbers were placed above the columns, ranging from -5 to +5. These column labels were helpful when guiding the participants in how to fill in the grid. However the pilot also highlighted that the youngest participants would not yet have studied negative numbers in their mathematics curriculum. Therefore in the main part of the study the column labels were altered to range from 1 to 11. These numbers were printed on a strip of paper to provide column headings (see Appendix E). In addition, the phrases 'Most unhelpful' and 'Most helpful' were used to label either end of the sorting continuum. The condition of instruction was in full view above the column headings at all times.

For each of the above stages (sorting into 5 piles and then filling in the Q grid), an instruction sheet was provided (Appendix A). Before each stage, participants took turns to read paragraphs of the instructions, and opportunities were provided to ask questions.

After the Q Sorting process the participants completed a short questionnaire of 5 questions, shown in Appendix F. The participants were asked whether they had direct experience of the strategies in the Q set, and whether they had been thinking about students beginning English or students proficient in English when rating the strategies. In addition, there were questions about whether the task was enjoyable, whether it was easy to understand, and whether the Q set was complete. Participants were encouraged to ask me about the questionnaire if anything was not clear. Finally I asked participants verbally where they would draw a dividing line between positive and

negative strategies. The responses to the questionnaire and this final question are discussed in Section 4.6.

With the participants not using English as their first language, I felt that a validity check was needed to ensure that the participants were able to understand the cards. To do this, after the participants completed the grid, I asked each student to briefly explain their choices for placing the cards at the extreme ends of the grid (column 1 and 11), and also two cards in the middle of the grid. If the participants gave an answer which indicated understanding of these six cards (two at each end and two in the middle) then I judged their understanding to be good enough for their results to be included.

After the Q sort was completed and the participants had left the room, I turned over the cards to reveal the number of each item, and recorded responses.

3.3.5 Analysis of Q sorts

The data derived from the Q sorts were analysed using the software package PQMethod (Schmolck, 2002). In brief this involved the identification of factors through factor analysis, with each factor exemplifying a way of responding to the Q sorting task which was shared by a number of participants. Further details of the analysis process are given in the results section.

3.3.6 Ethical approval and participant consent

This study was subject to a process of ethical approval conducted by the University of Sheffield. A copy of the ethical approval letter is included within Appendix G. Also included within Appendix G are the participant consent forms and information sheets used within the study.

The British Psychological Society *Code of Ethics and Conduct* (British Psychological Society, 2009) was consulted to identify relevant ethical issues, which are discussed below.

3.3.6.1 Standards of privacy and confidentiality

Records of participant responses were kept securely, with a personally identifying code that was known only to me, in order to protect confidentiality. There was no need to disclose confidential information in the research. Participants and parents were informed that data would be kept securely and would be destroyed following the completion of the research.

Audio recordings of the participants were made only with consent, and were stored securely in a way made clear to consent-givers.

3.3.6.2 Standards of informed consent

Participants and parents were informed about the nature and uses of the research through a letter (parents) or information sheet (participants), both of which are shown in Appendix G. Both parents and participants signed a consent form (Appendix G), which was kept securely for the duration of the research.

The consent form included instructions showing how participants could withdraw from the research, although this option was not taken up by any participants.

3.3.6.3 Standards of protection for research participants

I did not feel that participation in the research was likely to lead to any risks to wellbeing. As all participants were contacted through an adult representative in school, this person was available to provide support if any distress had been caused. The university research board evaluation provided a second opinion on this matter, and it was agreed that no harm to participants was likely.

3.3.6.4 Standards of debriefing research participants

The aims and methods of the research were explained to participants throughout, and so little debriefing was needed. Participants were thanked for their efforts and told that their opinion would be put together with other people's results, and then used to help adults in school support students with EAL.

3.4 Why Q methodology?

A first reason for selecting Q methodology is that it is designed to highlight differences between individuals as well as finding commonalities. This fits in with my earlier stated ideal of supporting practice which takes account of personal differences. In any situation we might expect individuals to have different viewpoints, but as stated in Section 2.4, there is research evidence of individual differences in the ways that people cope with co-existing cultural identities and differences in how students of different abilities cope with bilingualism.

Q methodology is also compatible with critical realism, my epistemological and ontological position, as stated in Section 3.2.2.

A further reason that I have favoured Q methodology over purely qualitative methods is that the participant group are not fluent speakers of English. As a result their discourse in a conventional interview may be lacking in the richness and abstract language necessary for a more linguistic analysis such as Interpretative Phenomenological Analysis (IPA) or Discourse Analysis.

3.5 Positionality

As mentioned above, Q methodology acknowledges and encourages the role of the researcher in interpreting the data and making a decision between differing models derived from factor analysis. In the same way that the participants can have many constructions of the role of adults in helping students with EAL, there are many possible constructions of their viewpoints that I can choose in the process of data interpretation. I also have a personal influence on the research through the ways in which I conduct the focus groups and choose or reject items for the Q sort. Within the process of choosing items for the Q sort in particular, decisions need to be made about whether two ideas are different enough to be considered separately in two items, or whether they should be combined into one item. Such decisions are subjective and are likely to be influenced by my prior constructions.

It is important to acknowledge that my actions as a researcher are inevitably going to be influenced by my prior beliefs, preferences and emotional reactions relating to the education provision for bilingual students. The following list gives a flavour of the personal factors which are likely to contribute to my interpretative decisions.

- I feel pleased to hear about situations exemplifying successful multiculturalism, where people who identify themselves as different groups go about their lives together, while maintaining a diversity of cultures.
- I think that all languages should have equal status in a school, no matter how long the speakers of the language have lived in the country, and that English should not have a privileged position because it is a majority language.
- I like to hear about adults working in education tailoring their working practices to the personal preferences of the young people and families they work with.
- I believe that the support that adults provide to students in school includes their social development, and the relationships between schools, families and communities.

3.6 Possible Criticisms of the Methodology

It could be argued that this study would ideally be conducted in the languages of the participants, with the Q set translated into their languages. I decided not to do this because resource limitations meant that I would not have been able to use a large number of language groups, and I wanted there to be as much variety in the P Set as possible. In addition, there is the complication that meaning equivalence is not preserved in translation, so it would be difficult to compare Q sets that were translations of each other. I felt that it would be extremely hard to interpret different perspectives if they were expressed through items which could have different nuances as a result of being expressed in different languages.

A further difficulty in the research design is that participants have different experience of the teaching strategies they are invited to consider. This is a potential issue for many

Q studies where there are items which the participants may not have experienced or thought about. As a result I asked participants within the instructions to imagine strategies being used if they had not directly experienced them. For example, one of the strategies involves adults giving students with EAL bilingual dictionaries, and I felt that as long as a participant understood the meaning of 'dictionary' they would be able to form a judgment of how useful this would be. In order to assess how much imagining was occurring I asked participants a question about it in the post-sort questionnaire (see Appendix F).

3.7 Research Quality Criteria

In order to decide on appropriate criteria for the quality of this research, it is necessary to consider the methodological implications of my stated philosophical position – critical realism. Ontologically, the realist aspect of the position implies that the findings can be true or false and so some consideration of traditional quantitative research criteria is necessary. On the other hand, the necessity of interpretation that critical realism entails means that some criteria for good interpretative research are also needed.

3.7.1 Quantitative Research Criteria

As Q methodology is not an experimental method, and openly embraces interpretation, it is possible to debate the relevance of traditional criteria for evaluating research (reliability, validity, generalisability, objectivity). Many authors have argued that such criteria are not relevant to interpretative research (Elliott, Fischer, & Rennie, 1999). Of the four criteria, it seems most straightforward to discount objectivity, as the actions of the participants and the researcher are openly subjective and interpretative. Generalisabilty is also a fairly simple issue for the Q methodologist, as no claim is made about the prevalence of different viewpoints in the general population based on the prevalence in the participant sample. Instead, it is only claimed that because a viewpoint has been shown to be possible among the participants, it is therefore possible within the population that the participants are members of, a simple logical claim.

In most quantitative methods, reliability can refer to the extent to which an instrument makes consistent measurements across time, or when the instrument is used by different people. Within Q methodology, when the Q sorting procedure is considered as an instrument, there is some doubt as to what consistency would tell us. Watts and Stenner (2012, p.51) point out that "repeated administration of a Q sort to a single participant actually tells you more about the reliability, or otherwise, of the participant's viewpoint than it does about the reliability of the method." As a person's viewpoint is accepted as being changeable over time, it would not concern the researcher if the response changed. However, when using the same Q sort with a number of different participants, the process of finding common viewpoints provides evidence of consistency. If the Q sorting process did not lead to responses from

participants in a systematic and consistent way, then no shared viewpoints would emerge. When shared viewpoints are found, evidence is provided that participants with similar viewpoints respond to the process with similar Q sorts.

It has also been argued that the traditional concept of validity is not relevant to Q methodology (Brown, 1980; Watts & Stenner, 2012). Traditionally, a process of measurement is deemed to be valid if it measures what it is supposed to measure. For example, a psychometric instrument which measures anxiety is only valid if people who are genuinely anxious are assigned a result which reflects high anxiety. The problem with Q methodology is that there is no other criterion by which to ascertain a person's viewpoint, and so it is argued that validity is not a useful concept.

It is worth considering how different philosophical positions view a common claim made by Q studies: that a group of participants hold a particular viewpoint. A relativist social constructionist would be making a claim only about discourse, namely that these participants had chosen a particular way of constructing the subject matter. However no claim would be made about underlying beliefs or dispositions which had caused the viewpoint to be expressed.

A critical realist claiming that participants hold a particular viewpoint would be looking beyond discourse. They could argue for the interpretation that the expression of a viewpoint in a Q sort gave an accurate reflection of the participants' beliefs and preferences. An alternative interpretation made within a critical realist framework might be that the claims about a person's viewpoint are likely to be mistaken. The fact that different interpretations can be debated implies issues of validity, or something similar to it, are still pertinent to Q methodology for a critical realist.

Within the context of the current study, it is possible to make interpretations of the results which include the idea that the Q sorting process measured something other than viewpoints. For example, participants could have sorted the items according to which ones were easier to understand, according to which items they saw first, or to mimic the sorting of a nearby friend.

One possible solution to the validity issue is to return to the participants after the analysis procedure and check that they express most agreement with the viewpoint to which they have been assigned. However, this process can be criticised on the grounds that a participant's viewpoint may have changed, or they may react differently to seeing their viewpoint expressed in a paragraph to seeing the items in a grid.

The position taken in this study is that it is an unrealistic aim to find an objective comparison between a participant's Q sort and any kind of criteria for checking. Instead, I have accepted that thinking about and using viewpoints is necessarily a matter of interpretation. Bearing in mind the applied nature of the study, it is worth considering how the viewpoints will be used. It is hoped that readers of the study (or perhaps more

realistically a précis of it!), will include the emerging viewpoints in their interpretations of the needs of students with EAL and the strategies that can be used to support them. The results of this study can be one element which contributes to these interpretations. Part of the process of incorporating the findings into professionals' interpretations will be their interpretation of the study and how likely the results are to reflect participants' viewpoints (the validity issue). Many of the measures which I have included in my method above will increase confidence in the interpretation that the validity of the study is acceptable. These measures include checking that participants understand the items, randomising the order of the items, encouraging participants to put items in piles before the sort, and reassuring participants that all viewpoints are accepted.

3.7.2 Qualitative criteria relevant to interpretation

As Q methodology is to some extent an interpretative process, I also wanted to include quality criteria that are relevant to interpretation in research. Elliott et. al. (1999) provide seven criteria for assessing qualitative research which are discussed below.

3.7.2.1 Owning one's perspective

In Section 3.5 I have described some of my prior beliefs about the topic area, with the acknowledgement that these are likely to influence my interpretation at several stages of the research.

3.7.2.2 Situating the sample

As part of the data collection process various items of contextual information were collected, and these are available to the reader within the results section.

3.7.2.3 Grounding in examples

As each participant's response to the Q-sorting task is available in full to the reader in the results section, I feel that examples of each of the emerging factors are available.

3.7.2.4 Providing credibility checks

Elliott et. al. (1999) describe several ways of checking the credibility of interpretative work. One of these is returning to the participants and asking them whether their contribution has been correctly interpreted. As an example, some Q methodologists advocate returning to the participants with the emerging factors, and checking that the participants are happy with the factor to which they have been assigned. In this study I decided against doing this, as I felt that it would be hard to interpret the participants' later responses. If they identified more with another factor, it would be uncertain whether this was a result of a change in their viewpoint or a failure of the method to capture their viewpoint in the initial procedure. Q methodologists acknowledge that people's viewpoints change over time.

Q methodology provides an important credibility check of any individual viewpoint due to features inherent in the analysis. If a factor is exemplified by a number of very similar viewpoints, then this similarity, which is highly unlikely to have occurred at random, provides evidence that the Q sorting process has indeed captured something important. The similarity of participants' viewpoints within a factor provides an example of Elliott et. al.'s (1999) third method of improving credibility: "comparing two or more varied qualitative perspectives" (p. 222).

As an additional credibility check, the full results of the Q sort are available to the reader of this research, and so the stages of interpretation are transparent.

3.7.2.5 Coherence

Q methodology provides a coherence to the data through its method of analysis. The emerging factors provide an explanation of much of the variance in the data through a small number of viewpoints. It is in the nature of the by-subject factor analysis procedure that factors are interpreted in relation to each other, with the aim being to find a set of factors which best explain the variance.

3.7.2.6 Accomplishing general versus specific research tasks

The issue of generalisability has already been discussed above. One of the benefits of Q methodology is that it is unambiguous about generalising findings. While the method shows that viewpoints exist, it says nothing about their prevalence.

3.7.2.7 Resonating with readers

I would regard this criterion as a property of the interaction between the research and a particular reader, rather than a property of the research itself. Nevertheless, in using professionals within the field of EAL to refine the Q set, I think that I have increased the chance that the process and outcomes of the research will seem relevant to people working within the field.

4. Analysis and Results

Throughout the process of analysis, an abductive, interpretative logic was used. As stated earlier, abduction can be thought of as inference to the best explanation of an unexpected occurrence based on what is already known about the situation. As with all Q methodology studies (and factor analysis studies in general) there are an infinite number of interpretations which fit the data. The value of an interpretation depends in part on how meaningful it is likely to be for the target audience. If an interpretation fits the data but makes no sense in the light of what we already know about the education of students with EAL, it is of little value. As a result the analysis process was a cyclical one where after a version of the analysis was performed it was compared with existing views of the subject matter. Alternative analyses were then run to determine which would be of more value.

As it is difficult to represent this cyclical process in a writeup with linear organisation, the analysis process that was finally chosen will be presented first, with the resulting interpretations. Choices involving rejecting alternatives will be presented at the most appropriate point, but in some cases this needs to be left until the discussion to fully appreciate the rationale behind decisions.

4.1 Information on the size and composition of the P set

In total, 36 participants performed the Q sort procedure. As mentioned in section 3.3.4, participants answered questions about selected items to ensure that their English level was sufficient to understand the Q set. The majority of the participants showed good understanding of the Q set, with only occasional misunderstandings. However the Q sorts from four participants were not included in the data because more than one item was misunderstood. Of the 32 participants who understood the Q set, Q sorts for two participants were not included because it became obvious that they were not motivated to consider items before placing them in the grid. I attempted to persuade these participants to do the task more carefully, but this was not successful and I felt sure that the Q sort did not reflect a viewpoint. This left 30 participants whose Q sorts were included in the analysis.

Two participants were put forward by school staff for participation despite only being at Stage 2 of learning EAL, but nevertheless met the criterion for demonstrating understanding when asked about their choices. These participants were included in the results.

Table 2 shows the composition of the P set in terms of year group, gender, EAL stage, number of years learning English, number of years in the UK, and level of linguistic diversity in the participants' school. 18 different languages were represented in the P set, although these are not listed individually to prevent possible inferences about

which participants were included in the analysis.

Table 2: Composition of the P set

Year group	Participants
5	4
6	6
7	1
8	0
9	6
10	3
11	5
12	0
13	5
Total	**30**
Gender	Participants
Female	23
Male	7
Total	**30**
Stage of EAL proficiency	Participants
2	2
3	21
4	7
Total	**30**
Number of years learning English	Participants
Less than 1	0
1-2	2
3-5	10
6+	18
Total	**30**
Number of years living in the UK	Participants
Less than 1	2
1-2	9
3-5	8
6+	11
Total	**30**
% of students with EAL in participant's school	Participants
0-5	12
6-10	8
11-15	0
16+	10
Total	**30**

As mentioned in Section 3.3.3.2 there is no widely-used criterion for deciding when enough participants have completed the Q sort. Once a potentially viable number of Q sorts had been completed, the factor extraction process was performed each time new Q sorts were added to the results. This enabled me to monitor how the addition of new Q sorts affected the factors obtained, and once 30 Q sorts had been added very little change was being observed following the addition of new Q sorts. This was one reason why I decided that 30 participants were sufficient. In addition, 30 participants were enough for a plurality of viewpoints to emerge, as will be shown in the remainder of this chapter. The total of 30 participants also fulfils the criterion mentioned in Section 3.3.3.2 of being fewer than the number of items in the Q set (46).

4.2 Initial results

The original results of the Q sorting process can be represented as a table, with each row representing a participant and each column representing an item of the Q Set. The value in each cell of the table, varying from -5 to 5, indicates the column which the participant placed the item in. This original table of results in shown in Appendix H.

The results were entered into the software PQMethod for Windows (Schmolck, 2002), a free resource which is sufficient to perform the analysis procedures necessary in this study. Extracts of the output from the software are included as Appendix I.

As every sort contains equivalent values on the same scale, correlations between sorts can be calculated. A table of correlations between every sort is shown in Appendix J, having been calculated by the PQMethod software. A colour-based scale is overlayed on the figures, with blue corresponding to more negative correlations and red to positive correlations.

4.3 Factor extraction

The factor analysis process is described in detail by Brown (1980). The starting point is the table of correlations between all of the sorts involved in the study (Appendix J). The factor analysis process detects a “pattern of similarity” (Watts & Stenner, 2012, p.98), which represents a first calculation of what the sorts have in common. This pattern of similarity is then labelled Factor 1, and is then extracted. Extraction involves calculating what variance remains when the variance accounted for by Factor 1 is removed, leading to a new table of correlations. The process then proceeds in the same way, to detect and extract Factor 2, and then further factors.

Two factor extraction options are available in PQMethod, Centroid Factor Analysis (CFA) and Principal Components Analysis (PCA). Although the choice between these methods is unlikely to significantly affect the factors extracted (McKeown & Thomas, 1988), I felt that CFA was a better fit with the philosophical position guiding the study. It is common practice with CFA to rotate factors according to interpretation through abductive logic

(this process is explained further in Section 4.4). However this process is highly controversial with PCA (Brown, 2008). Without judgmental rotation PCA is much more restrictive, and leads to a single best solution. This does not fit well with the critical realist viewpoint that there are many valuable interpretations of reality. CFA allows for some influence of the researcher, acknowledging the idea that research occurs in the context of theory, and that this necessarily affects the interpretation of results. It is for these reasons that CFA is generally preferred among Q methodologists (Watts & Stenner, 2012).

Factors were extracted using CFA (Horst 5.5 option). The process of analysis was run many times, with different numbers of factors being extracted and rotated, to determine the effect on the result. The final decision was that the extraction of 4 factors would be most suitable, and the results of this process are shown below. The results of the extraction of 4 factors, with correlations of each sort to each factor, are shown in Table 3 below. Each factor represents a portion of the shared variance between the sorts. As can be seen in the final row, factors extracted earlier in the process tend to explain more variance. This is to be expected as once the initial common variance has been extracted, there is a lot less in common between the 30 sorts. Alternative solutions with a greater or lesser number of factors are evaluated in the discussion section.

It is theoretically possible to extract as many factors as there are sorts, but only the earlier factors explain enough variance to be informative. Several criteria have been proposed to determine a cutoff point. One of the most commonly used is the Kaiser-Guttman criterion (Guttman, 1954; Kaiser, 1960). This states that an eigenvalue of a factor needs to be above 1 for inclusion. The eigenvalue is the ratio between the variance explained by a factor and the variance explained by a single sort, and so a value over 1 indicates that the factor explains more variance than one sort. As the purpose of factor analysis is to account for variance while reducing a larger numbers of sorts to a smaller number of explanatory factors the Kaiser-Guttman criterion identifies a minimum level of explanatory power.

As shown in Table 3, the four factors extracted all meet the Kaiser-Guttman criterion. There are a number of other statistical standards which provide a more stringent test of whether a factor should be included. However when deciding on whether to keep factors in the current study I mainly concentrated on the following criteria:

- Does a factor provide a viewpoint which is both meaningful and meaningfully different from other factors?
- Does keeping a factor give the reader of the research a greater appreciation of the variety of viewpoints existing among the P set (and the population of students with EAL)?

- Are enough participants included in the factor array for it to be considered a shared viewpoint? Brown (1980) advocates that a factor can be based on two or more sorts, but I decided to follow Watts and Stenner (2012; p.131) in their stricter advice that "Three or more is probably safer." Therefore I did not want to keep factors if it meant that any factor would be based on less than three participants.

Table 3: Unrotated Factor Matrix

	Factor 1	Factor 2	Factor 3	Factor 4
1	0.4203	-0.1757	-0.1096	0.1189
2	0.6134	-0.4756	0.1099	0.3059
3	0.2729	-0.5446	-0.1112	0.2095
4	0.4843	0.0623	0.2223	0.0726
5	0.6638	0.0372	0.2160	0.1511
6	0.6645	0.0932	0.1014	0.1117
7	0.6290	0.2696	0.2472	-0.4077
8	0.6661	0.2095	0.1481	0.0846
9	0.4489	0.1176	0.1957	0.3574
10	0.5634	0.1828	0.2612	0.2551
11	0.6108	0.3008	-0.1191	0.0013
12	0.4984	-0.0344	0.0653	0.1199
13	0.6909	0.2504	-0.3145	0.3547
14	0.5876	-0.4026	-0.2753	0.0262
15	0.5316	0.0627	-0.0575	0.0905
16	0.4516	0.4251	-0.1526	0.0161
17	0.4063	-0.1629	-0.1393	0.1945
18	0.3077	0.3813	-0.0958	-0.4004
19	0.3771	0.3380	-0.2446	-0.0522
20	0.3334	-0.1678	0.0349	0.0449
21	0.2821	-0.1639	-0.1655	-0.2398
22	0.4329	-0.2827	0.1091	-0.2664
23	0.5447	0.0925	-0.1024	-0.1051
24	0.3726	-0.4320	-0.2704	0.0302
25	0.4411	-0.4697	0.2650	-0.0708
26	0.2622	-0.1751	0.3156	-0.2402
27	0.5226	-0.2684	0.1717	-0.2327
28	0.3585	0.0980	-0.3695	-0.1157
29	0.6316	0.3825	-0.0990	-0.1288
30	0.4263	0.4518	0.1630	-0.2854
Eigenvalues	7.4941	2.5322	1.1369	1.2794
% Variance explained	25	8	4	4

At this point it has become easier to justify the method of CFA used. The PQMethod software offers two versions of CFA, the traditional CFA described in Brown (1980) and an alternative known as Horst 5.5. The difference is rather technical for a full description in this thesis, but the PQMethod manual (Schmolck, 2012) offers some explanation to the user of the software. As part of the CFA process, an estimate of each sort's communality (how much it has in common with other sorts) is used in the calculation of each factor. These estimates of communality will change as the analysis proceeds from the first factor to the last. If the Horst 5.5 process is used, once the final factor has been calculated, the resulting estimates of communality are inputted into the calculation of the first factor and the process begins again. This results in an iterative loop, which proceeds towards convergence of the communality estimates. Schmolck (2012) states that the advantage of the Horst method is that it avoids situations where eigenvalues of later factors are much higher than earlier factors. Such situations can be hard to interpret, and as one of these situations occurred when I ran the traditional CFA method, I decided that the analysis would be aided by using Horst 5.5.

4.4 Factor Rotation

Following the factor extraction process, there is a sense in which the relationships between sorts become unchangeable. In explaining this, Watts and Stenner (2012) invoke the idea of a conceptual space. We can imagine a graph with each of the two axes of the graph representing a dimension. In the current context each dimension would be a factor, and we could place sorts on the graph according to the loading on each factor. Figure 4 below is an example of such a graph with data from the current study shown within the PQMethod software.

To understand the conceptual space in the current study, we would first have to imagine a 3rd factor, represented by an axis perpendicular to the other two, extending out of the page and behind it. A fourth dimension is much harder to visualise, but we can partially access the 4-dimensional conceptual space by looking at 2 dimensions at a time in a graph similar to Figure 4.

Once the factor extraction process is complete, the sorts do not move in relation to each other. Factor rotation is relative movement between the factors (axes) and the sorts. The process can be thought of as moving the axes so that they point towards clusters of sorts. The factors then correspond to shared viewpoints, which is the intended outcome of the study. Figure 5 below shows the same data as Figure 4, but a rotation made so that there are sorts close to both the y-axis (Factor 1) and the x-axis (Factor 2).

Figure 4: 2-dimensional conceptual space defined by Factors 1 and 2

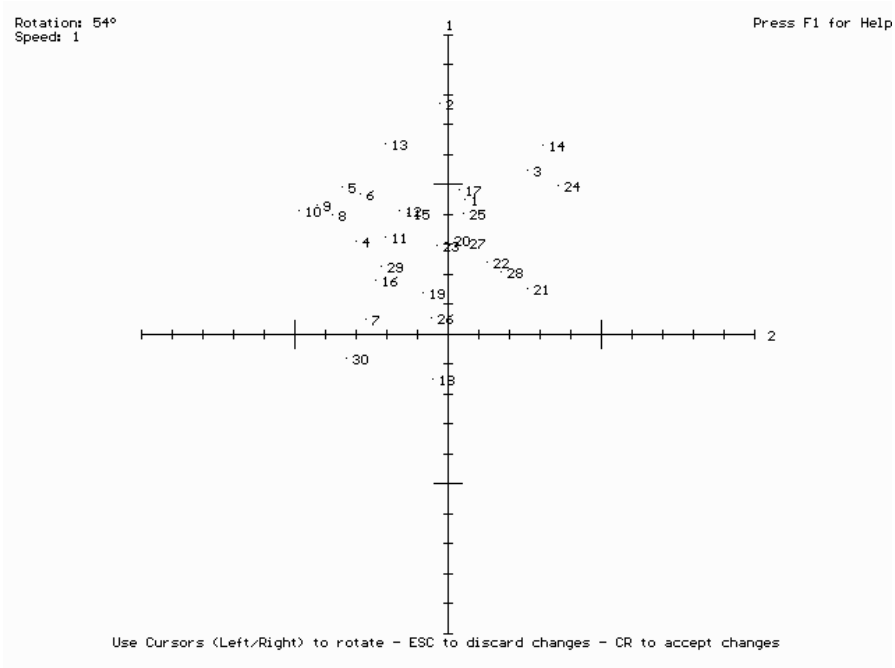
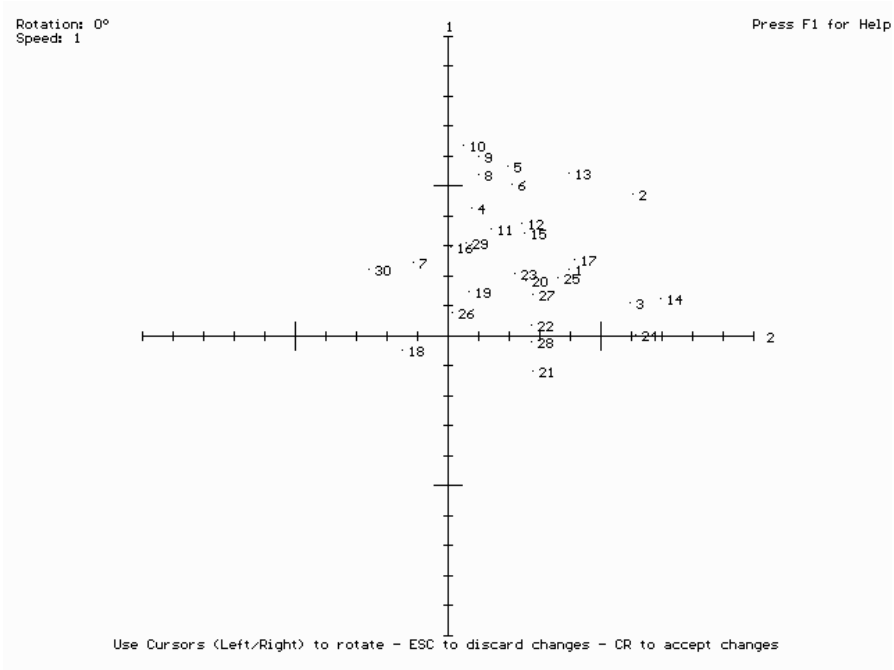


Figure 5: Factors 1 and 2 rotated



Two methods for factor rotation are available within PQmethod. Varimax rotation is an algorithm which maximises the extent to which sorts correlate with only one factor. Manual rotation is also possible, where two factors are selected and the user selects a degree of rotation. Following Watts & Stenner (2012), I used varimax to attain an initial rotation, and then used manual rotation to fine tune the rotation. This is advised

because while the varimax method finds a solution where sorts are loaded as much as possible on one factor, it does not take into account which combinations of sorts make the most interpretative sense when they are averaged to represent a factor. The researcher's judgment can be employed through adding manual rotation to the varimax method. The rotated factors are shown in Table 4 below. Rotating the factors resulted in redistribution of the variance explained by each factor, but the total variance explained by each factor remains the same (41%).

Table 4: Rotated Factor Matrix with an X Indicating a Defining Sort

	Factor 1	Factor 2	Factor 3	Factor 4
1	0.2211	0.3953	0.1303	0.1071
2	0.4757	0.6066	-0.1049	0.3206
3	0.1109	0.5961X	-0.2057	0.1321
4	0.4270	0.0750	0.1867	0.2651
5	0.5697X	0.1945	0.2438	0.2995
6	0.5074	0.2107	0.3410	0.2344
7	0.2454	-0.1155	0.5738	0.5412
8	0.5385	0.1022	0.4018	0.2341
9	0.6004X	0.0979	0.0957	0.0477
10	0.6389X	0.0489	0.2123	0.1685
11	0.3582	0.1423	0.5697	0.0684
12	0.3749	0.2418	0.1841	0.1879
13	0.5424	0.3951	0.5238	-0.2001
14	0.1243	0.6937X	0.1973	0.2194
15	0.3437	0.2519	0.3231	0.1100
16	0.2959	0.0074	0.5615X	-0.0731
17	0.2543	0.4128	0.1120	0.0350
18	-0.0485	-0.1501	0.5992X	0.1603
19	0.1482	0.0668	0.5342X	-0.0850
20	0.1883	0.2560	0.0558	0.1961
21	-0.1170	0.2767	0.2278	0.2218
22	0.0388	0.2710	0.1386	0.5060X
23	0.2074	0.2198	0.4457	0.1918
24	0.0037	0.6134X	0.0555	0.1419
25	0.1970	0.3582	-0.1109	0.5577
26	0.0780	0.0145	0.0094	0.5003X
27	0.1414	0.2759	0.1578	0.5548X
28	-0.0169	0.2733	0.4600	-0.0379
29	0.3109	0.0579	0.6736	0.1337
30	0.2233	-0.2583	0.5530X	0.2674
Eigenvalue	3.3	3	3.9	2.4
% Variance explained	11	10	13	8

4.5 Creation of Factor Arrays

Crosses in Table 4 above indicate that a sort is a defining sort, meaning that it is typical of this factor and no other factors. This is important for the next stage of the analysis, when a factor array is calculated for each factor. The factor array is an arrangement of the items in the Q set which shows how participants who exemplify a factor responded. The array is produced by ranking the items according to how positively or negatively they were rated by the relevant participants. A weighted average is used, with participants who correlate more strongly with a factor having more influence on the factor array.

As explained by Watts and Stenner (2012), there is no set criterion for whether a sort should be included in the factor array. As a minimum requirement, the correlation between the sort and the factor should have a significance level less than 0.01. This would indicate that only 1% of randomly generated sorts would correlate so highly with a factor. The formula for the 1% significance level is:

2.58 * 1 / the square root of the items in the Q set

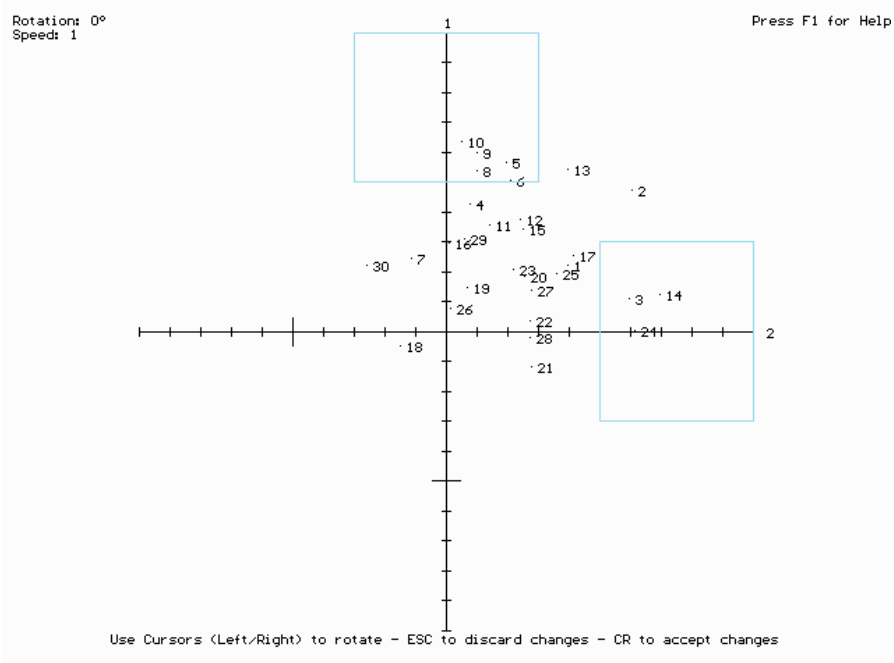
With 46 items this comes to 0.3804. A sort can only be included in a factor array if it correlates at this significant level for only one factor (in a positive or negative direction).

However, Watts and Stenner (2012) also discuss the possibility of using a more stringent criterion for including sorts. A higher factor loading can be used as a threshold to ensure that included sorts are more typical of the factor. As an alternative, exemplified by Jordan, Capdevila and Johnson (2005), the sort's loading on a factor must exceed a minimum threshold to be included, with loadings on other factors being below a lower threshold. In Jordan et. al.'s study, for a sort to be included in a factor, it needed a loading of 0.6, with all other factor loadings below 0.4. In the current study the criteria used are for the sort to have a loading of greater than 0.5, with no other factors having a loading of 0.3 or greater. The reasons for choosing these figures will be left to later, but for now the reasons for choosing two figures rather than one can be explained. Figure 6 below is a screenshot of the analysis software, and illustrates the inclusion criteria of loading above 0.5 on a factor and below 0.3 on other factors. For the purposes of clarity this is shown only for Factors 1 and 2 in a two dimensional illustration, but the criteria apply to all 4 factors. Figure 6 illustrates that most sorts tend to lie between two factors, and there is therefore the danger that if too many sorts are included then the factor arrays will be highly correlated with each other, leading to strong similarities between factors. This occurs because the factor array is not derived from the factor itself, but rather a weighted average of the sorts included in the factor array. If other factors are ignored in the diagram below, then sorts 5, 6, 8, 9 and 10 would be included in Factor 1, which would lead to a factor array with a fairly low correlation to Factor 2's array, as none of these sorts load highly on Factor 2.

However, if a simple 0.5 criterion was used, then Sort 13 would be included in Factor 1, despite being only slightly more correlated to Factor 1 than Factor 2. Inclusion of Sort 13 in the calculation of Factor 1's array would bring it closer to Factor 2's array, increasing the correlation between the final factors. Similarly, inclusion of Sort 2 within Factor 2 would bring that array closer to Factor 1.

As I want the final factors to be distinct viewpoints which are different from each other, it seems preferable to use the 0.5 and 0.3 criteria. I will return later to why these numbers were chosen.

Figure 6: Visual representation of the criteria for including sorts



Once the factor arrays were constructed the positions of each item are as shown in Table 5 below. The factor arrays are shown visually and then interpreted in the following 'Factor Interpretation' chapter.

Table 5: Position of each item for each factor array

	Factor			
	1	**2**	**3**	**4**
1 Adults talk about the benefits of being bilingual.	0	3	-2	0
2 Bilingual students can study their first language in school.	-4	-4	1	-2
3 Adults let bilingual students speak their first language outside lessons.	0	1	-3	1
4 Bilingual students use English to talk about work in class.	-1	2	0	0
5 Bilingual students can speak their first language in front of the class.	-5	-1	-5	-5
6 Bilingual students leave normal lessons to go to English lessons for bilingual students.	1	-3	-2	-4
7 Adults buy books or DVDs which say the same thing in two languages.	2	-2	3	-5
8 Adults help bilingual students to get to know their classmates.	2	3	3	4
9 Adults teach the difficult words that will be used in a lesson before the lesson.	1	3	2	0
10 Adults talk to bilingual students about what work to do at home.	-2	-1	0	-2
11 Adults explain things using pictures and diagrams, not just words.	1	-3	4	2
12 Adults listen to bilingual students read in English regularly.	2	1	-1	3
13 Adults talk to a class about bullying students because they're bilingual.	-3	5	-2	4
14 Adults show the important words and ideas in a lesson in a bilingual student's first language.	0	-1	2	0
15 Adults believe that bilingual students can do well at school.	2	4	0	2
16 Adults let students find their own ways to succeed in school.	-2	1	-4	-4
17 Adults teach bilingual students new words by pointing to pictures or things.	-1	0	-1	2
18 Adults let bilingual students sit with students who speak English well.	-3	5	0	1
19 Adults give bilingual students more time to do work in class.	3	-2	1	3
20 Adults use computers to translate between different languages.	-3	-4	3	-1
21 Adults know what work bilingual students can do in their first language.	-1	-1	-5	0
22 Adults allow bilingual students to ask classmates when they don't understand.	3	4	-1	1
23 Adults spend extra time teaching bilingual students to write in English.	4	2	1	5
24 All students discuss different languages in the classroom.	-4	2	-4	-3
25 Adults spend extra time teaching bilingual students spelling.	5	-1	2	1
26 Adults let bilingual students talk about classroom tasks in their first language.	-3	-5	-4	-4
27 Adults tell bilingual students about jobs and university after school.	1	0	-3	-3
28 Adults give bilingual students chances to speak English when the whole class is listening.	0	0	-3	-1
29 Adults put different languages on walls around the school.	-1	1	-2	2
30 Adults are friendly to both bilingual and English-only students.	3	3	0	2
31 Adults check that bilingual students can understand instructions.	5	0	1	3
32 Adults let students who speak the same language sit together in class.	-2	-5	-1	5
33 Bilingual students get extra time in tests or exams.	4	0	5	-3
34 Adults tell bilingual students how they can use ICT to learn.	-4	-1	-1	3
35 Adults show examples of how to do a task using English.	-1	2	4	-2
36 Adults speak the same amount to bilingual students and English-only students.	-1	1	-3	-2
37 Adults talk to bilingual students' parents with a person who can translate.	-2	-2	0	1
38 Adults are able to speak different languages.	0	0	2	-1
39 Adults give bilingual students easier work when they first start learning English.	3	-3	2	1
40 Adults use hand actions or body actions to help bilingual students understand.	0	-3	4	-2

	Factor			
	1	**2**	**3**	**4**
41 Adults think about how difficult it is for bilingual students to use English.	2	-2	-1	-1
42 Adults give bilingual students dictionaries with their first language and English.	4	1	5	-1
43 Bilingual students can use their first language during tests or exams.	-5	-4	1	-3
44 Adults give bilingual students a 'word bank' with useful words.	1	4	3	0
45 Adults try to learn some words of their students' first language.	-2	-2	-2	-1
46 Adults put bilingual students with a 'buddy' when they first start school.	1	2	1	4

4.6 Responses to the post-sort questionnaire

The post-sort questionnaire can be found as Appendix F, and was used to obtain information on how the participants experienced the task. As a question additional to the questionnaire, the participants were asked how many columns they considered to contain helpful strategies and how many unhelpful. I felt that this question needed some explaining and so gave the question orally. The aggregated results are as follows:

Question 1: Did you remember ideas or just imagine them?

This question was used to ascertain whether students had direct experience of the strategies shown in the Q set and were remembering them, or whether they had no direct experience and relied on their imagination.

Always remember	0 (0%)
Mostly remember	10 (33%)
Half and half	17 (57%)
Mostly imagine	3 (10%)
Always imagine	0 (0%)

Question 2: Did you think about students starting to learn English or students already quite good at English?

Always students starting to learn English	2 (7%)
Mostly students starting to learn English	14 (47%)
Half and half	11 (37%)
Mostly students already quite good at English	3 (10%)
Always students already quite good at English	0 (0%)

Question 3: How did you feel about doing the activity?

Responses to this question varied between one word and two sentences. The descriptions of the activity are shown abbreviated below, with frequency of their occurrence:

Good (10)
Useful (1)
Interesting (3)
Helpful (5)
Alright (3)
Fine (1)
Great (1)
Helps you to learn more (1)
Better to just ask students (1)
Enjoyable (2)
Informative (1)
Could get boring (1)
Too many cards (2)
Hard to think about it (1)
Understandable (1)
Fun (1)
Didn't mind it (1)
Too long (1)
Scared (1)
OK (1)
Felt part of the project (1)
Hard (1)
Confident (1)
A bit nervous (1)
A good idea (1)
Helped you to be honest (1)
Could show what I think (1)

Question 4: What other ideas should have been there?

Nine students identified additional ideas, which are listed verbatim below. Two students gave two ideas.

"What should a bilingual student realises they are being bullied?"
"What do bilingual enjoy learning English?"
"How do bilingual learn English apart from going to school?"
"Helping students more at home"
"To spend time after school with English teacher."
"To watch films in English with subtitles, so you learn faster."
"Adults should ask students what they mostly find hard."
"For the 'buddy' to also speak the same language."
"The adults need to talk with the parents about how they are in school."
"Adults encourage different bilingual students interact / speak / communicate."
"Having adults in normal lessons to encourage and explain classwork to you."

Question 5. Which sentences did you not understand?

16 participants mentioned at least one item that they were not able to understand. When this occurred the item was explained and the participant had the chance to reposition the item.

The items mentioned were as follows:

Item 1 (4 times)	Item 14 (1)	Item 36 (2)
Item 2 (1)	Item 16 (2)	Item 44 (2)
Item 6 (1)	Item 26 (1)	Item 46 (1)
Item 13 (2)	Item 27 (1)	

Additional question: Where is the dividing line between helpful and unhelpful strategies? (sometimes explained to participants in more detail)

Participants either placed the dividing line between two columns, or picked a neutral column that was neither helpful nor unhelpful. As can be seen below almost all participants indicated that more items were helpful than unhelpful.

Between -4 and -3	1 (3%)
-3 is neutral	1 (3%)
Between -3 and -2	6 (20%)
-2 is neutral	0 (0%)
Between -2 and -1	6 (20%)
-1 is neutral	2 (7%)
Between -1 and 0	8 (27%)
0 is neutral	3 (10%)
Between 0 and 1	2 (7%)
1 is neutral	0 (0%)
Between 1 and 2	1 (3%)

4.7 Qualitative observations

Within the focus groups used to generate further items for the Q set, an observer took notes of my actions and those of the participants. The main observations were as follows:

- The observer did not feel that the students were being led towards ideas.
- In the primary focus group, students read the instructions confidently. Some wrote down their ideas before discussion, while others drew pictures.
- Students indicated agreement or disagreement with items that were mentioned by nodding and shaking of heads in both groups.
- Participants produced several new ideas in both groups.
- In the secondary focus group, participants were initially concerned about the purpose of the group, and started quietly.
- Two participants were more dominant in the secondary focus group.
- Participants in the secondary focus group acted seriously and looked down when racism was mentioned.

A number of observations made in the Q sorting task are relevant to the interpretation of the results:

- Students took between 30 and 60 minutes to complete all parts of the task.
- Older students tended to do the task more carefully, spending time rearranging the items once all had been placed in a column.
- All participants who were included in the analysis were willing to check their response when asked to do so, but some made very few adjustments when all of the items were in place.
- No copying of responses was detected.

5. Factor Interpretation

5.1 Interpretations for each factor

In this section, the factor array is shown for each factor, and a written description is given from the first-person view of a student with EAL expressing this viewpoint. Some explanation of the rationale for the written viewpoint is given.

For each factor, the contextual information collected for the participants exemplifying that factor is shown. However, in the interests of maintaining participant confidentiality, specific languages are not mentioned. In addition I have shown the contextual information relating to each factor rather than showing which contextual information is linked to each participant, also to ensure that any one individual can not be identified.

Also shown is the participants' answer to the question: "Which columns do you think contain items that are more unhelpful than helpful?"

In all of the factor arrays below a pink cell indicates that no other factor gave this item a higher rating. A blue cell indicates no other factor gave a lower rating.

Figure 7: Factor 1 array

-5	-4	-3	-2	-1	0	1	2	3	4	5
5 Bilingual students can speak their first language in front of the class.	2 Bilingual students can study their first language in school.	13 Adults talk to a class about bullying students because they're bilingual.	10 Adults talk to bilingual students about what work to do at home.	4 Bilingual students use English to talk about work in class.	1 Adults talk about the benefits of being bilingual.	6 Bilingual students leave normal lessons to go to English lessons for bilingual students.	7 Adults buy books or DVDs which say the same thing in two languages.	19 Adults give bilingual students more time to do work in class.	23 Adults spend extra time teaching bilingual students to write in English.	25 Adults spend extra time teaching bilingual students spelling.
43 Bilingual students can use their first language during tests or exams.	24 All students discuss different languages in the classroom.	18 Adults let bilingual students sit with students who speak English well.	16 Adults let students find their own ways to succeed in school.	17 Adults teach bilingual students new words by pointing to pictures or things.	3 Adults let bilingual students speak their first language outside lessons.	9 Adults teach the difficult words that will be used in a lesson before the lesson.	8 Adults help bilingual students to get to know their classmates.	22 Adults alllow bilingual students to ask classmates when they don't understand.	33 Bilingual students get extra time in tests or exams.	31 Adults check that bilingual students can understand instructions.
	34 Adults tell bilingual students how they can use ICT to learn.	20 Adults use computers to translate between different languages.	32 Adults let students who speak the same language sit together in class.	21 Adults know what work bilingual students can do in their first language.	14 Adults show the important words and ideas in a lesson in a bilingual student's first language.	11 Adults explain things using pictures and diagrams, not just words.	12 Adults listen to bilingual students read in English regularly.	30 Adults are friendly to both bilingual and English-only students.	42 Adults give bilingual students dictionaries with their first language and English.	
		26 Adults let bilingual students talk about classroom tasks in their first language.	37 Adults talk to bilingual students' parents with a person who can translate.	29 Adults put different languages on walls around the school.	28 Adults give bilingual students chances to speak English when the whole class is listening.	27 Adults tell bilingual students about jobs and university after school.	15 Adults believe that bilingual students can do well at school.	39 Adults give bilingual students easier work when they first start learning English.		
			45 Adults try to learn some words of their students' first language.	35 Adults show examples of how to do a task using English.	38 Adults are able to speak different languages.	44 Adults give bilingual students a 'word bank' with useful words.	41 Adults think about how difficult it is for bilingual students to use English.			
				36 Adults speak the same amount to bilingual students and English-only students.	40 Adults use hand actions or body actions to help bilingual students understand.	46 Adults put bilingual students with a 'buddy' when they first start school.				

Factor 1 I want to succeed academically through concentrating on English.

Summary

I want to succeed academically through concentrating on English, not my own language. The most helpful role that adults can play is to spend time making sure I'm making the most progress possible, rather than helping me to have a good social experience in school.

Statistical information

Factor 1 has an eigenvalue of 3.3 and explains 11% of the study variance. Three participants (5, 9, 10) contributed to this factor array by virtue of their Q sort having a loading above 0.5 on Factor 1 and loadings below 0.3 on all other factors.

Contextual information for participants exemplifying this factor

- Year groups: 7; 9; 13.
- Gender: 2 female and 1 male
- Stage of EAL learning: 2; 3; 4.
- Time learning English: 5 years; 9+ years; 9+ years.
- Time in the UK: less than 6 months; 1 year; 2 years.
- Languages spoken: all European languages.
- Percentage of students in participants' school identified as EAL: all 4%.
- Columns identified as containing unhelpful items: -5 to -3; -5 to -2; -5 to -1.

Full first-person viewpoint

Adults should be helping me to do tasks well in English, as I'm not yet secure in using this language. I want adults to give me extra help with academic tasks such as reading (12, +2) writing (23, +4) and spelling (25, +5). I'm also more keen than most students to speak English in front of the class (28, 0). In the meantime, I deserve extra time to do work in exams (33, +4) and in class (19, +3). I'm concerned that I won't be able to understand what to do so I want adults to check that I understand (31, +5) and allow me to ask classmates (22, +3) if they're not available. I can also use a dictionary myself (42, +4) if I need to, but I think the most useful help comes person-to-person. As a result I don't really like resorting to using computers for learning (34, -4) or translation (20, -3). Other than that I don't have strong feelings about teaching techniques such as discussions in English (4, -1), using props (pictures and things) for teaching (17,-1), teaching through examples (35, -1), preteaching difficult vocabulary (9, +1), or a 'word bank' (44, +1).

I have mixed feelings about leaving the class for specialised English lessons, but I'm more in favour of this than most students (6, +1), and it could help with the academic progress that I'm motivated by.

I'm not in school to develop my first language, so I don't think it's appropriate to speak it to the class (5, -5), study my first language (2, -4) or have a discussion about lots of different languages (24, -4). I want exams to test me in English, not my first language

(43, -5). I don't really like using my first language to help with classroom tasks (26, -3), but I'm a little more positive about this than most students as I can see it contributing to my academic development.

It's important to me to have a good relationship with adults in school, so I like them to be friendly to all linguistic groups (30, +3), and recognise that I'm going to do well academically (15, +2), and aim for university and a good job (27, +1). However, for now, some allowances need to be made to help me get there, so I may need easier work at first (39, +3), and adults to think about what's most difficult for me (41, +2). I'm motivated enough to decide what to do at home (10, -2), and there's no need to tell my parents about my schoolwork (37, -2). I'd rather adults spoke to me in English rather than learn my language (45, -2).

I don't see adults as having much of a role in helping me to fit in socially. Of course I want help to get to know my classmates (8 +2), but compared to my peers I'd rather do most of this myself, and I'm less positive than most students about bilingual students having a 'buddy' when they first start in school (46, +1). I don't need adults to stop me getting bullied (13, -3) and I don't need adults to organise my relationships in class by sitting me with people who speak my language (32, -2) or English (18, -3).

Further comments for Factor 1

In interpreting factor 1 I felt that there are strong opinions on whether adults should be providing help or allowances in certain areas (exams or in class). However the particular teaching techniques seem to have been given more neutral ratings in comparison to other factors. Perhaps these participants were more happy to assume that the teacher knows best?

Figure 8: Factor 2 Array

-5	-4	-3	-2	-1	0	1	2	3	4	5
26 Adults let bilingual students talk about classroom tasks in their first language.	2 Bilingual students can study their first language in school.	6 Bilingual students leave normal lessons to go to English lessons for bilingual students.	7 Adults buy books or DVDs which say the same thing in two languages.	5 Bilingual students can speak their first language in front of the class.	17 Adults teach bilingual students new words by pointing to pictures or things.	3 Adults let bilingual students speak their first language outside lessons.	4 Bilingual students use English to talk about work in class.	1 Adults talk about the benefits of being bilingual.	15 Adults believe that bilingual students can do well at school.	13 Adults talk to a class about bullying students because they're bilingual.
32 Adults let students who speak the same language sit together in class.	20 Adults use computers to translate between different languages.	11 Adults explain things using pictures and diagrams, not just words.	19 Adults give bilingual students more time to do work in class.	10 Adults talk to bilingual students about what work to do at home.	27 Adults tell bilingual students about jobs and university after school.	12 Adults listen to bilingual students read in English regularly.	23 Adults spend extra time teaching bilingual students to write in English.	8 Adults help bilingual students to get to know their classmates.	22 Adults alllow bilingual students to ask classmates when they don't understand.	18 Adults let bilingual students sit with students who speak English well.
	43 Bilingual students can use their first language during tests or exams.	39 Adults give bilingual students easier work when they first start learning English.	37 Adults talk to bilingual students' parents with a person who can translate.	14 Adults show the important words and ideas in a lesson in a bilingual student's first language.	28 Adults give bilingual students chances to speak English when the whole class is listening.	16 Adults let students find their own ways to succeed in school.	24 All students discuss different languages in the classroom.	9 Adults teach the difficult words that will be used in a lesson before the lesson.	44 Adults give bilingual students a 'word bank' with useful words.	
		40 Adults use hand actions or body actions to help bilingual students understand.	41 Adults think about how difficult it is for bilingual students to use English.	21 Adults know what work bilingual students can do in their first language.	31 Adults check that bilingual students can understand instructions.	29 Adults put different languages on walls around the school.	35 Adults show examples of how to do a task using English.	30 Adults are friendly to both bilingual and English-only students.		
			45 Adults try to learn some words of their students' first language.	25 Adults spend extra time teaching bilingual students spelling.	33 Bilingual students get extra time in tests or exams.	36 Adults speak the same amount to bilingual students and English-only students.	46 Adults put bilingual students with a 'buddy' when they first start school.			
				34 Adults tell bilingual students how they can use ICT to learn.	38 Adults are able to speak different languages.	42 Adults give bilingual students dictionaries with their first language and English.				

Factor 2 Help me to maintain my linguistic identity while also integrating with the majority group.

Summary

I want to be supported so that I can socially integrate and interact with adults and my peers in the same way as everyone else. I also have pride in my own language but I don't want my EAL status to separate me from others.

Statistical information

Factor 2 has an eigenvalue of 3.0 and explains 10% of the study variance. Three participants (3, 14, 24) contributed to this factor array by virtue of their Q sort having a loading above 0.5 on Factor 2 and loadings below 0.3 on all other factors.

Contextual information for participants exemplifying this factor

- Year groups: 5; 6; 10.
- Gender: 3 female.
- Stage of EAL learning: 3; 3; 4.
- Time learning English: 3 years; 7 years; 9+ years.
- Time in the UK: 3 years; 9+ years; 9+ years.
- Languages spoken: South Asian language; African language; European language.
- Percentage of students in participants' school identified as EAL: 4%; 9%; 19%.
- Columns identified as containing unhelpful items: -5 to -4; -5 to -3; -5 to 0.

Full first-person viewpoint

I'm concerned about fitting in with English-speakers at my school, and when bilingual students first come to a school they need a buddy to show them round (46, +2), not be put into special classes (6, -3). I want adults to help me get to know my classmates (8, +3), and sit me with English-speakers (18, +5), who I will be able to get to know by asking about what's going on in class (22, +4) in English (4, +2). I also want adults stopping other children from bullying me (13, +5). I don't want to be stuck in a group of other children with the same language (32, -5), using our own language to talk about classroom work (26, -5), or even studying our language together (2, -4). I want to feel that I belong to the whole class group, and although I have mixed feelings about speaking to the class in English I'm more open to it than some students (28, 0). I'm proud of my own language but this can be used outside class (3, +1).

I want my classmates to have a positive view of me as a bilingual student (1, +3), and I want them to know about my language (24, +2). I'm even open to the idea of speaking my language to the whole class but I might need some persuading (5, -1).

As well as social integration with peers, I also want to be an equal part of teacher-student interactions, with adults being friendly to me (30, +3) and talking to me (36, +1) just like all the other students (it doesn't have to be in my language (45, -2). I'm a bit reluctant for all our conversations to be about clarifying language (31, 0), as I want adults to think I can do as well as everyone else (15, +4), not take pity on me for

my difficulties (41, -2). If I need to catch up I'm more open than most students to finding my own ways (16, +1), so I don't especially appreciate allowances like extra time for work in class (19, -2), easier work (39, -3) or letting me use my own language in exams (43, -4). There may be some occasions where it's fair for bilingual students to get more time for exams though (33, 0).

Although getting help in school isn't my main concern, I do have some preferences in how it's done. I prefer strategies that don't mark me out as different, so give me a 'word bank' to refer to (44, +4), let me learn words beforehand (9, +3), or show examples of doing a task (35, +2). I'm not so keen on the teacher doing obvious extras just for the bilingual students, like pointing to pictures and diagrams (11, -3), checking understanding of instructions (31, 0), using computers to translate (20, -4), giving me special books with my language (7,-2) showing my language for the important words (14, -1) or miming (40, -3).

Extra help with writing is quite helpful, but I'm not one of the students who needs extra help with spelling (25, -1). I'm also not very keen on adults in school speaking to my parents (37, -2)

Further comments on Factor 2

This factor was a little difficult to interpret because the three exemplars had different views of how many items were helpful and how many unhelpful. One participant felt that all items except the two most negative columns were helpful, while another felt that all columns up to and including the middle column were unhelpful.

Within this factor there were mixed views of the use of students' first language in school. Most of the negative views seemed to be associated with putting bilingual students together in their own group, which is reflected in the viewpoint.

Figure 9: Factor 3 Array

-5	-4	-3	-2	-1	0	1	2	3	4	5
5 Bilingual students can speak their first language in front of the class.	16 Adults let students find their own ways to succeed in school.	3 Adults let bilingual students speak their first language outside lessons.	1 Adults talk about the benefits of being bilingual.	12 Adults listen to bilingual students read in English regularly.	4 Bilingual students use English to talk about work in class.	2 Bilingual students can study their first language in school.	9 Adults teach the difficult words that will be used in a lesson before the lesson.	7 Adults buy books or DVDs which say the same thing in two languages.	11 Adults explain things using pictures and diagrams, not just words.	33 Bilingual students get extra time in tests or exams.
21 Adults know what work bilingual students can do in their first language.	24 All students discuss different languages in the classroom.	27 Adults tell bilingual students about jobs and university after school.	6 Bilingual students leave normal lessons to go to English lessons for bilingual students.	17 Adults teach bilingual students new words by pointing to pictures or things.	10 Adults talk to bilingual students about what work to do at home.	19 Adults give bilingual students more time to do work in class.	14 Adults show the important words and ideas in a lesson in a bilingual student's first language.	8 Adults help bilingual students to get to know their classmates.	35 Adults show examples of how to do a task using English.	42 Adults give bilingual students dictionaries with their first language and English.
	26 Adults let bilingual students talk about classroom tasks in their first language.	28 Adults give bilingual students chances to speak English when the whole class is listening.	13 Adults talk to a class about bullying students because they're bilingual.	22 Adults alllow bilingual students to ask classmates when they don't understand.	15 Adults believe that bilingual students can do well at school.	23 Adults spend extra time teaching bilingual students to write in English.	25 Adults spend extra time teaching bilingual students spelling.	20 Adults use computers to translate between different languages.	40 Adults use hand actions or body actions to help bilingual students understand.	
		36 Adults speak the same amount to bilingual students and English-only students.	29 Adults put different languages on walls around the school.	32 Adults let students who speak the same language sit together in class.	18 Adults let bilingual students sit with students who speak English well.	31 Adults check that bilingual students can understand instructions.	38 Adults are able to speak different languages.	44 Adults give bilingual students a 'word bank' with useful words.		
			45 Adults try to learn some words of their students' first language.	34 Adults tell bilingual students how they can use ICT to learn.	30 Adults are friendly to both bilingual and English-only students.	43 Bilingual students can use their first language during tests or exams.	39 Adults give bilingual students easier work when they first start learning English.			
				41 Adults think about how difficult it is for bilingual students to use English.	37 Adults talk to bilingual students' parents with a person who can translate.	46 Adults put bilingual students with a 'buddy' when they first start school.				

Factor 3 My language has a place in helping me to keep up academically.

Summary

My important relationships are with my peers rather than adults in school. I want to be included in academic tasks despite my lower level of English, so strategies that use my abilities in my first language are helpful.

Statistical information

Factor 3 has an eigenvalue of 3.9 and explains 13% of the study variance. Four participants (16, 18, 19, 30) contributed to this factor array by virtue of their Q sort having a loading above 0.5 on Factor 3 and loadings below 0.3 on all other factors.

Contextual information for participants exemplifying this factor

- Year groups: 9; 10; 10; 13.
- Gender: 3 female; 1 male.
- Stage of EAL learning: 3; 3; 3; 4.
- Time learning English: 3 years; 4 years; 7 years; 9+ years.
- Time in the UK: 1 year; 2 years; 3 years; 4 years.
- Languages spoken: Middle Eastern language; African language; European language; European language.
- Percentage of students in participants' school identified as EAL: 4%; 10%; 10%; 10%.
- Columns identified as containing unhelpful items: -5 to -3; -5 to -3; -5 to -2; -5 to -1.

Full first-person viewpoint

Adults need to put a lot of strategies into place so that bilingual students are included in lessons despite their lack of proficiency in English. Some of these strategies have the effect of including my first language in classroom life. For example, adults should use computers to translate (20, +3), bilingual dictionaries should be available (42, +5), and bilingual media should be bought (7, +3). Showing important words in my first language (14, +2), and adults actually being able to speak my language (38, +2) are also helpful. My positive attitude to my first language also means that I'm more positive than most students about studying this language (2, +1). If my language can't be used, then methods which allow me to link words and their meaning are useful, including talking about diagrams (11, +4), talking through examples (35, +4), or even using actions and gestures along with words (40, +4). However, I don't really appreciate being taught new vocabulary using pictures (17, -1). Just giving me a 'word bank' (44, +3), or teaching me the words before the lesson (9, +2) will be sufficient.

I'm a lot more positive about strategies to keep me included in class rather than getting special help. Extra help with spelling is quite useful (25, +2), but I'm not as keen as most students about help with reading (12, -1) and writing (23, +1).

Although I want my own language to play a part in my education, its main role is to

help me understand in English, not be the focus. If there's a classroom discussion I don't want to be separated by using my own language (26, -4), and I really don't want to speak my own language in front of the class (5, -5). I also don't want to discuss different languages (24, -4). In fact once I'm outside the classroom I'd rather get along in English (3, -3).

As long as adults are teaching me well I'm not so bothered about what they think of me. I don't mind if they're friendly to me (30, 0), talk to me as much as other students (36, -3) learn to say 'hello' in my language (45, -2) or put my language up on walls around the school (29, -2). Adults shouldn't be thinking about what I can do in my own language (21, -5), that I'm lucky to be bilingual (1, -2), that all bilingual students do well in school (15, 0), that I'll be ok on my own (16, -4), or that I'm set for university (27, -3). Instead they should make things fairer and give me work that suits my level of English (39, +2) and give me enough time to do it (19, +1). I'm even open to the idea of catching up at home if necessary (10, 0). I very much feel that bilingual students should get more time in exams (33, +5), and even use their own language in exams (43, +1).

I don't see the adult's role as helping with my social life, through protecting me from bullying (13, -2) or providing a buddy (46, +1), although support in getting to know my classmates (8, +3) is helpful. However I don't want to be embarrassed by having to ask my classmates when I don't understand (22, -1), speaking English in front of the class (28, -3), or being taken out of class to learn English (6, -2).

Figure 10: Factor 4 Array

-5	-4	-3	-2	-1	0	1	2	3	4	5
5 Bilingual students can speak their first language in front of the class.	6 Bilingual students leave normal lessons to go to English lessons for bilingual students.	24 All students discuss different languages in the classroom.	2 Bilingual students can study their first language in school.	20 Adults use computers to translate between different languages.	1 Adults talk about the benefits of being bilingual.	3 Adults let bilingual students speak their first language outside lessons.	11 Adults explain things using pictures and diagrams, not just words.	12 Adults listen to bilingual students read in English regularly.	8 Adults help bilingual students to get to know their classmates.	23 Adults spend extra time teaching bilingual students to write in English.
7 Adults buy books or DVDs which say the same thing in two languages.	16 Adults let students find their own ways to succeed in school.	27 Adults tell bilingual students about jobs and university after school.	10 Adults talk to bilingual students about what work to do at home.	28 Adults give bilingual students chances to speak English when the whole class is	4 Bilingual students use English to talk about work in class.	18 Adults let bilingual students sit with students who speak English well.	15 Adults believe that bilingual students can do well at school.	19 Adults give bilingual students more time to do work in class.	13 Adults talk to a class about bullying students because they're bilingual.	32 Adults let students who speak the same language sit together in class.
	26 Adults let bilingual students talk about classroom tasks in their first language.	33 Bilingual students get extra time in tests or exams.	35 Adults show examples of how to do a task using English.	38 Adults are able to speak different languages.	9 Adults teach the difficult words that will be used in a lesson before the lesson.	22 Adults alllow bilingual students to ask classmates when they don't understand.	17 Adults teach bilingual students new words by pointing to pictures or things.	31 Adults check that bilingual students can understand instructions.	46 Adults put bilingual students with a 'buddy' when they first start school.	
		43 Bilingual students can use their first language during tests or exams.	36 Adults speak the same amount to bilingual students and English-only students.	41 Adults think about how difficult it is for bilingual students to use English.	14 Adults show the important words and ideas in a lesson in a bilingual student's first language.	25 Adults spend extra time teaching bilingual students spelling.	29 Adults put different languages on walls around the school.	34 Adults tell bilingual students how they can use ICT to learn.		
			40 Adults use hand actions or body actions to help bilingual students understand.	42 Adults give bilingual students dictionaries with their first language and English.	21 Adults know what work bilingual students can do in their first language.	37 Adults talk to bilingual students' parents with a person who can translate.	30 Adults are friendly to both bilingual and English-only students.			
				45 Adults try to learn some words of their students' first language.	44 Adults give bilingual students a 'word bank' with useful words.	39 Adults give bilingual students easier work when they first start learning English.				

Factor 4 Help me to build personal relationships with adults and other children.

Summary

It's important to me that adults like me and interact with me. I also like adults to help me make friends, which may be easiest with peers who speak the same language. I'm not too interested in academic issues yet.

Statistical information

Factor 4 has an eigenvalue of 2.4 and explains 8% of the study variance. Three participants (22, 26, 27) contributed to this factor array by virtue of their Q sort having a loading above 0.5 on Factor 4 and loadings below 0.3 on all other factors.

Contextual information for participants exemplifying this factor

- Year groups: 5; 6; 6.
- Gender: 1 male, 2 female.
- Stage of EAL learning: 3; 3; 4.
- Time learning English: 5 years; 6 years; 8 years.
- Time in the UK: less than 6 months; 4 years; 9+ years.
- Languages spoken: South Asian language; European language; European language.
- Percentage of students in participants' school identified as EAL: 19%; 21%; 21%.
- Columns identified as containing unhelpful items: -5 to -1; -5 to –1 with column 0 neutral; -5 to 0.

Full first-person viewpoint

I like to be with other students who speak the same language in class (32, +5), but I'm not using my language for classroom tasks (26, -4), and I don't want my language to become the focus of the class (5, -5) or for many languages to be discussed (24, -3). Being with students who speak the same language is more of a social comfort than a way into learning. To help me socially, I'd like adults to intervene with bullying (13, +4), put bilingual students with a buddy (46, +4), and help bilingual students to get to know their classmates (8, +4). It also helps me to feel included if adults check that I understand instructions (31, +3), and are friendly to me (30, +2).

I don't like to be marked out as different in class by speaking in my first language to the class (5, -5), using special materials (7, -5), leaving the class to go to my own special lessons (6, -4), or by adults communicating with me in actions rather than proper language (40, -2).

Outside class I like multilingual displays (29, +2), and I'm more keen than most students on bilingual students speaking their first language outside lessons (3, +1). I'm not especially keen on studying my own language though (2, -2)

Academically, I want support where I get direct attention from adults for basic skills such as reading (12, +3), writing (23, +5), a little spelling (25, +1) and using ICT (34, +3).

I want the approval of an adult thinking that I can do well in school (15, +2) and knowing I can also do things in my own language (21, 0). It's ok if the adult wants to learn a few words of my language (45, -1), but I'm not too worried about whether the adults are native speakers of my language (38, -1). At home adults in school don't need to worry about me (10, -2) but I quite like it if they can let my parents know what's going on in school (37, +1). Please don't just leave me to get on with it on my own! (16, -4)

I'm not worried about academic success, so I don't feel that getting extra time in exams (33, -3) or using my language in exams is that important (43, -3). This also means that strategies with a more academic focus aren't that important, like dictionaries (42, -1), learning difficult words before a lesson (9, 0), translating important words to my language (14, 0), a 'word bank' (44, 0) or working through examples (35, -2). Teaching using pictures and things (17, +2) or diagrams (11, +2) is more fun. I'm quite happy to be given easier work (39, +1), with extra time (19, +3). I'm not yet thinking about jobs and university (27, -3).

5.2 Factor comparisons

Comparisons between factors can help to bring the analysis together into a coherent whole. The output from the PQMethod software includes an analysis of the differences between each pair of factors. The statistic used in this comparison is the Z-score for each item used in the calculation of the factor arrays. The Z-score is based on the rating of an item by the participants loading on that factor, and is a measure of the difference between the weighted average ranking of this item and the weighted average for all items. Specifically, once the ratings of all items have been calculated for the factor array, the mean of these ratings and the standard deviation can be calculated. The Z-score is the difference between an item's rating and the mean, divided by the standard deviation. Negative scores indicate disagreement with an item, and positive scores agreement. For each pair of factors, differences in Z-scores are shown in Appendix I (pages 113-121), and a summary of the main differences is described in Sections 5.2.1 to 5.2.6.

5.2.1 Comparisons between Factors 1 and 2

There is a non-significant correlation of 0.24 between factors 1 and 2, reflecting the distinctness of these viewpoints. The items which Factor 1 rated higher often relate to language support strategies or allowances in tests and exams which Factor 2 rejects due to marking students with EAL as different. Factor 2 rates language support strategies more highly when they can be done more covertly. Factor 2 also rates strategies relating to taking pride in a first language more highly, as Factor 1 is mainly concerned with academic development in English. Factor 2 is also more favourable about support with social integration.

5.2.2 Comparisons between Factors 1 and 3

Factor arrays 1 and 3 have a correlation of 0.41, which is statistically significant at the 0.01 level and the highest correlation. This reflects the fact that both are clearly concerned more with academic support rather than social support.

However there are differences between the viewpoints relating to the student-adult relationship. Factor 1 gives higher ratings for friendliness to students with EAL and consideration of their strengths and difficulties. Factor 3 is more concerned with particular strategies being put in place for the whole class, rather than one-to-one support.

Factor 3 values the role of a first language in academic study in comparison to Factor 1, but Factor 1 is less negative about using a first language socially.

5.2.3 Comparisons between Factors 1 and 4

Factor arrays 1 and 4 have a correlation of 0.32, below the 0.01 significance level but still reflecting some agreement. Most of the items that Factor 1 rates more highly have some relation to academic success, and the more mature outlook of this factor may reflect the fact that the three exemplar sorts came from secondary school pupils. Factor 4 exemplars are all primary school pupils, and they seem more concerned with a sense of belonging based on positive relationships with both adults and their peers.

Both factors have a positive view of adults devoting extra time to students with EAL for activities such as reading, writing and spelling, but responses to other items indicate that this positive view may be for different reasons. Watts and Stenner (2012) advise that a factor should be interpreted holistically. Other items indicate that Factor 1 has a positive view of academic success and, and as a result I interpreted the wish for extra help as motivated by its positive effect on academic performance. However Factor 4 seems much less concerned with academic success, and more with positive relationships with adults and a sense of belonging. Accordingly I have interpreted Factor 4's positive view of adult support as being based more on the social aspect of this.

5.2.4 Comparisons between Factors 2 and 3

Factors 2 and 3 are slightly negatively correlated (-0.02). This reflects very differing views on how much adults should provide social support, with Factor 2 being much more in favour of support for peer interaction and a friendly attitude from adults. Factor 2 also shows more of a sense of pride in a first language, as Factor 3 sees a student's first language mostly as a way to understand classroom content. Factor 3 is generally more in favour of strategies that aid understanding.

5.2.5 Comparisons between Factors 2 and 4

Factor arrays 2 and 4 are moderately, but insignificantly correlated (0.36). Both factors favour adults providing social support. The main differences lie in the nature of this social support. Factor 2 is more positive about integration, favouring students with EAL sitting in groups of good English-speakers, rather than with their own language group. Factor 2 is less in favour of strategies which mark out students with EAL as different, including allowances being made such as extra time in class or easier work. However more pride in a first language is indicated by Factor 2. A final difference is that Factor 2 is more in favour of strategies focussed on academic work.

5.2.6 Comparisons between Factors 3 and 4

There is a low correlation of 0.17 between Factor arrays 3 and 4. Most of the items that Factor 3 rates more highly involve the use of first languages in school for academic purposes. However Factor 4 sees more importance in the social use of first languages, and also values adults spending extra time with students with EAL much more than Factor 3. Factor 3 seems generally more concerned with academic success, whereas Factor 4 is more concerned with social factors.

6. Discussion

6.1 Answering the research question

The research question stated at the end of the literature review was:

> What are the viewpoints of students with EAL towards strategies that can be used to help them by adults in school?

The viewpoints obtained by Q methodology indicate that students differ in their viewpoints towards adult support. This initial part of the discussion will describe how the viewpoints see different aspects of support, in relation to prior research.

6.1.1 The place of other languages in school

Overall attitudes to first languages in school were fairly negative. For example, the items 'Adults let bilingual students talk about classroom tasks in their first language' (26) 'Bilingual students can use their first language during tests or exams' (43), 'Bilingual students can speak their first language in front of the class' (5) and 'All students discuss different languages in the classroom' (24) were among the most negatively rated items. These were the only items which had a rating or -3 or below in at least 3 viewpoints.

However, some viewpoints were selectively positive about more linguistic diversity in school. For example Factor 2 views bilingualism as a source of pride, an attitude which is viewed favourably in much of the research literature (e.g. Cummins, 2000). However Factor 2 generally followed the kind of assimilationist position identified by Baker (2006). While other languages have value, English is the language through which learning takes place.

In contrast, Factor 3 was the most positive about using a student's first language in learning. Several strategies were seen as positive if the meaning of learning expressed in English could be clarified by translation into students' first languages. These strategies included dictionaries and showing key words in a first language. The agreement with such an approach supports teaching techniques which are based on the idea of 'Common Underlying Proficiency' (Cummins, 1981), whereby learning in one language can be expressed in another language without the need for complete relearning of the material. Factor 3 was also the most positive about studying a first language in school. However, Factor 3 was not entirely positive about first languages, as English was seen as the preferred language outside the classroom, and attempts to raise the status of bilingualism were largely rejected.

Factor 4 had a further distinct view of the place of first languages. The only strongly positive view was that students who speak the same language sit together in class. However, as the idea that they should discuss classroom tasks in this first language was strongly rejected this appears to have more of a social basis.

Factor 1 was perhaps the most negative about first languages in school. Very few items

about first languages were rated positively in the array, and these involved the first language being translated into English (dictionaries, books and DVDs).

Overall, the current findings indicate that there are some pupils who have a viewpoint on additive bilingualism and the use of first languages which is less positive than the research literature and current government guidance. As described in the preceding paragraphs, all factors have a mixture of positive and negative views about different aspects of the use of first languages, although there is disagreement about which strategies involving first languages are positive or negative. This would indicate that school staff who are planning to implement an additive bilingualism policy should consider how their students will view different aspects of such a policy.

Some of the strategies within the Q set can be used within school to promote a positive attitude towards linguistic diversity and additive bilingualism. Using such strategies would be one response to the mixed views about additive bilingualism discussed above. Some of these strategies are rated more positively by Factors 2 and 4, which tend to represent younger students. For example 'Adults talk to a class about bullying students because they're bilingual' (13) was rated -3, +5, -2 and +4 by factors 1, 2, 3 and 4 respectively. Similarly, 'Adults put different languages on walls around the school' (29) was rated -1, +1, -2, and +2 by the four factors. This may indicate that work on changing the attitudes of students would be more accepted in primary school rather than with teenagers. However, this distinction was less clear cut for the item 'Adults talk about the benefits of being bilingual' (1), with ratings of 0, +3, -2 and 0, and also for 'All students discuss different languages in the classroom' (24), with ratings of -4, +2, -4 and -3. The question of how mixed student attitudes to additive bilingualism should influence school policies is discussed further in Section 8.2.

One point to bear in mind is that there is evidence that participants may in fact be more positive about using their first language than their expressed viewpoints indicate. Bourne (2001) measured the extent of first-language use directly using microphones and found that this occurred more than was reported by students.

All of the viewpoints include the view that in certain situations English is the appropriate language, and other languages are secondary or undesirable. This idea is reminiscent of Agirdag's (2010) research on the use of Turkish in Belgian schools. It was found that the dominant view in these schools favoured monolingualism or bilingualism in European languages. This view was expressed by the majority, but also accepted by a Turkish-speaking minority. Agirdag suggests that bilingual students and their families need to hear messages about the positive consequences of bilingualism so that bilingual education can succeed.

Regarding the social use of students' first languages, an alternative view is that students rightly recognise that use of their first language will limit their social opportunities. This could be why Factor 3 chose the -3 column for 'Adults let bilingual students speak their first language outside lessons' (3), and was generally more negative about social uses of first languages. Limitation of social opportunities may be particularly the case in the schools included in this study, where there were no large

minorities speaking the same language. This might limit the potential for extended social networks that could be included in conversations carried out in minority languages. Nevertheless the viewpoint of Factor 2 provides evidence that some students want to take pride in their first language. There is also an ethical case for ensuring that students can speak in their first language without fear of bullying or other negative social consequences.

The finding that all factors include reservations about the use of first languages in schools provides a valuable contrast to the research on the high prevalence and multiple functions of first language use in schools (e.g. Bourne, 2001). Much of the previous research has taken place in highly diverse city schools, which could be one reason that first languages played a more prominent role in school life.

6.1.2 Fostering a sense of belonging

The study uncovered differing viewpoints on how adults should play a role in helping students with EAL to achieve a sense of belonging. All factors except Factor 1 indicated a strong opinion about belonging to groups. Factor 2 is in favour of integrating with English-speaking students and achieving a sense of belonging with the whole group. Special allowances for students with EAL which mark them out as different are rejected.

Factor 4 seems less sensitive to perceived differences with the overall group, but is still in favour of receiving help to socially interact with the group. Factor 4 also sees the value in belonging to a group defined by first language, and also achieving a sense of belonging through positive relationships with adults.

Factor 3 is generally more negative about adult support for social interaction, and also strategies which highlight how these students are different to their monolingual peers. Factor 3's sense of belonging seems to derive from being part of a wider peer group which is independent from adults and not defined linguistically.

With Factor 1 seeming the least concerned with a sense of belonging, it is not surprising that this viewpoint is the most positive about withdrawal into specialist classes for students with EAL (item 6 rated +1 compared to -3, -2 and -4 in factors 2, 3 and 4 respectively). The negativity towards this strategy shown by the other viewpoints vindicates the opposition to withdrawal shown in the Swann Report (Department for Education, 1985). However the more positive view shown by Factor 1 suggests that this strategy could be helpful when students feel unconcerned about their sense of belonging in the school and are in favour of withdrawal. This indicates that withdrawal is more appropriate when students have attended a school for some time, and may need specialised instruction in more academic language. However withdrawal is currently used more often for newly-arrived students (Cable et al., 2004). Factor 1 may also be more in favour of withdrawal because their priorities lean more towards academic issues and less towards social inclusion than other participants. This would have implications for the selection of students that would benefit from withdrawal.

Item 37, concerning discussion between adults in school and the parents of students

with EAL, was added to allow participants to comment on whether they valued this kind of liaison, and whether this helped them to feel included and valued in the school. While this item was not placed at the extreme ends of the grid in any factors, there were some differences. Factor 4 was the most positive, giving a rating of +1, and Factors 1 and 2 were most negative, giving a rating of -2.

6.1.3 What do participant responses say about their sense of cultural identity?

The viewpoints provided some evidence on how a sense of cultural identity can be more complex than simply identifying with one culture. This can be understood through Berry's (1990) two-dimensional model, with individuals to some extent identifying with both their family's culture, and the school culture (which may be influenced by several cultures or mainly the majority culture). Factor 2 combined the ideas of showing pride in one's own cultural identity, while also wanting to fit in with the majority group.

The rejection of cues to a student's home culture by some factors (especially Factor 3), may best be understood according to the concept of Bicultural Identity Integration (Benet-Martínez et al., 2002). Individuals with low BII react against cues to a particular culture, rather than being happy to access different aspects of their cultural identity according to cues.

6.1.4 Specific strategies for learning

Two of the more popular strategies were related to checking of understanding in class (22 and 31). There was a generally positive view of adults assisting understanding by providing multiple representations of meaning, a strategy supported by research (e.g. Tang, 1992). In particular, the item 'Adults explain things using pictures and diagrams, not just words' (11) was rated especially positively by Factor 3 at +4, possibly because these students were focused on both academic inclusion and specific strategies. The use of dictionaries (42) was also generally rated very highly, but less so by Factor 4.

There was less support for the strategy of supporting students with EAL through ICT, as recommended by certain authors including Chavez (1990). With the exception of Factor 4, the item related to ICT (34) was rated negatively. These negative ratings could be based on prior experiences or a preference for other modes of learning. Whichever is the case, this finding indicates that students should be consulted about their views on the use of ICT, and it should not be seen as an option which is necessarily particularly suitable for students with EAL.

As discussed in Section 2.2.2 cooperative learning or communitarian learning has been found to be especially beneficial for bilingual students. While it was difficult to fully explain this concept within a Q set item, some of the items have a bearing on the use of cooperation in class. All of the viewpoints were more positive about discussion taking place in English (4) rather than a student's first language (26), in contrast to recommendations in the literature that students should be encouraged to discuss in their first language (DfES, 2006). The points made in section 6.1.1 about explaining the benefits of first language use therefore seem to be relevant to a teacher using

cooperative learning strategies for students with EAL. The viewpoints also varied in the extent to which social interactions were seen to be part of the learning process. Specifically, Factor 2 was keener to sit with models of good English (18, +5) and check understanding through them (22, +4).

Section 2.2.3 highlighted research on the importance of setting tasks at a challenging level for students with EAL, rather than giving them easier work. The relevant items are 19 (more time for tasks) and 39 (giving easier work). Viewpoints 1, 3 and 4 had a positive view of these items, indicating that some students may not agree with the idea of getting work as challenging as the rest of the class. This may indicate the value of developing students' sense of self-efficacy through highlighting their ability to complete difficult tasks with support. Item 19 was generally rated more positively than item 39, indicating that having more time is valued more than an easier task. This distinction was added because of a comment in a focus group about feeling rushed to work too quickly. Despite a generally positive view of being given less demanding tasks, all viewpoints valued some academic support strategies more highly. This indicates that the ideal situation would be to have the help to complete the same work as monolingual classmates.

6.1.5 How do the findings relate to the model of inclusion set out in *Excellence and Enjoyment*?

The model of inclusion used in *Excellence and Enjoyment* (DfES, 2006) emphasises "setting suitable learning challenges", "responding to pupils' diverse needs" and "overcoming potential barriers to learning" (p. 3 Introductory Guide). All three of these categories of practice are needed to ensure provision is personalised to meet students' needs. Overall the research provides strong support for the idea that students have different viewpoints and needs, and that accessing student opinions will be necessary to tailor support and provide students with an understanding of why particular strategies are used.

Perhaps the most variation between viewpoints is found for the category of "overcoming potential barriers to learning". There is variation in the academic support that students value in helping them to be included in a lesson, and also different preferences in the role of adults as providing social support themselves or facilitating social interaction.

6.1.6 How does the consideration of contextual factors help to make sense of the viewpoints?

The main aim of Q methodology is not to make generalisations about the prevalence of viewpoints in the general population or populations defined by contextual factors such as age and gender. However, contextual information was collected in the hope that this information could help to make more sense of the emerging viewpoints. The ideas given in this section are tentative suggestions of why contextual factors could have influenced viewpoints, but further research would be needed to make confident generalisations.

The most consistent pattern in contextual information concerned the age of the participants (as indicated by year group). All of the seven participants exemplifying Factor 1 and Factor 3 were secondary school pupils, while 5 out of 6 of the participants exemplifying Factor 2 and Factor 4 were primary school students.

A principal difference between these two pairs of factors is that Factors 1 and 3 are much less positive about support with social interactions than Factors 2 and 4. It seems intuitively to make sense that older students would appreciate more independence in developing their social lives in school, preferring adults to concentrate on providing academic support.

Factor 3's antipathy towards using a first language in social contexts (3, -3) can be interpreted with regards to the age of these students. Teenage students with EAL may be more aware of social status and social groups than younger children. As a result of this, they may be more reluctant to use a different language which could isolate them from a wider peer group in schools where English is the most commonly used language for socialising. Factor 1's exemplars are also older, but rated this item more neutrally (3, 0). The issue could be less pertinent for these students as they attend schools where only 4% of the school roll is classified as EAL. There may not be enough students sharing languages for socialising to take place in a language other than English.

Factor 3's appreciation of using first languages for academic tasks also makes sense considering the age of these students. Older students with EAL would be likely to have started learning English at an older age than younger students with EAL showing the same English proficiency. Where a student had started learning English at an older age, we might assume that the student had been educated in their first language before learning English. This would mean that significant learning had taken place in a first language, and Cummins' (1981) Common Underlying Proficiency model would predict that this learning could be best accessed through use of students' first languages. However this would be less likely for younger students that had not experienced a significant amount of education in their first language.

Participants exemplifying Factor 1 are also older, but come from schools with very low levels of linguistic diversity (4% of students were classified as EAL). This factor did not value the use of first languages in lessons, which might be predicted according to Cline et. al.'s (2002) research on mainly white schools.

Regarding the other contextual factors, clear patterns were not apparent for the distribution of participants in different viewpoints according to gender, stage of EAL proficiency, number of years learning English, number of years in the UK and language spoken.

6.1.7 How did the participants interpret the task?

The post-sort questionnaire was used partly to assess how participants thought about the strategies they were asked to sort. As with most Q methodology studies, participants would have varying levels of experience of the items (in this case experience of adults using the strategies). Within the Q sort instructions participants

were asked to imagine strategies if they could not remember them being used. Question 1 in the post-sort questionnaire asked whether strategies had been accessed through memory or imagination. The most common answer (57%) was that participants had remembered half of the strategies and imagined half of the strategies. The second most common answer was 'Mostly remember' (33%), with the remainder responding 'Mostly imagine' (10%). When interpreting the results of this study it is therefore important to remember that participants are rating strategies that they have directly experienced and those which they have not.

A further question is whether the viewpoints relate to students just beginning to learn English, students who are already fairly competent in English, or both. This issue was partly addressed in the post-sort questionnaire, specifically the second question: "Did you think about students starting to learn English or students already quite good at English?". The majority of participants (83%) reported that they were thinking about 'Mostly students starting to learn English' or 'Half and half' (half students starting to learn English and half students already quite good at English). This implies that the findings may be more relevant to students in the earlier stages of learning English. The answers to Question 2 also give some indication of how the participants interpreted the term 'bilingual student' which was extensively used in the Q set. One interpretation of 'bilingual' is that this person already has competence in two languages, but the participants in this study appear to interpret 'bilingual' as meaning that more than one language is used by the person. Participants were guided to this latter interpretation in the task instructions.

6.2 Alternatives to the interpretation used

6.2.1 Why not fewer factors?

A possible alternative solution with only two factors was trialled. The first factor corresponded to a combination of Factors 1 and 3 identified above, while the other factor corresponded to a combination of 2 and 4. These combinations are quite predictable considering that these are the main correlations found between factors in the 4-factor solution.

This two-factor solution had the disadvantage of only explaining 33% of the variance in the study, considerably less than the 4-factor solution. More importantly, my decision was motivated by looking at comparisons between the pairs of factors that would be combined in a 2-factor solution. I feel that the differences outlined in Section 5.2, firstly between Factors 1 and 3 and secondly between Factors 2 and 4 are sufficiently interesting and useful for four distinct factors to be communicated in this research. As an example, the combination of Factors 1 and 3 obscured the positive view of some participants concerning the use of tools to link languages in class. In the context of the study I felt it was particularly important to include positive views of first language use. Through the outlining of the differences between factors and presentation of the full factor arrays, the research also provides the transparency for the reader to make their own decision on whether the 4-factor solution was warranted.

A three-factor solution was also trialled. The three factors did not map onto the four factors of the 4-factor solution in a predictable way. This solution led to a high degree of confounded factors after the varimax rotation, and the factor arrays did not seem to present as clear a picture as in either the 2-factor or 4-factor solutions, and so this 3-factor solution was not considered further.

6.2.2 Why not more factors?

The analysis was also run with 5 factors, but it was found that the fifth factor had an eigenvalue of 0.98, below the threshold of 1. In addition, the fifth factor only had one sort which could be included according to the 0.5/0.3 criteria.

When the same analysis was run with 6 factors, only the sixth of these did not meet the Eigenvalue threshold of 1. Therefore a rotation was performed on the first five factors. Compared to the four factor solution presented above, factors 1, 2 and 4 were largely unchanged. Factor 3 seemed to split into two factors. However these two factors were quite highly correlated (0.40), and the first of these was significantly correlated with Factor 1 (0.48). In addition, one of the new factors had only two loading sorts, and so I decided that adding a fifth factor did not add any value to the study.

6.2.3 Should more sorts have been included?

The number of sorts that contributed to the factor arrays as defining sorts was determined by the factor rotation and the inclusion criteria for a sort. The main aim in this study was to discover distinct viewpoints in a way that informed readers about the variety of opinions held by students with EAL. In accordance with this aim, the factor rotation was carried out so that the axes (factors) pointed to groups of sorts with high correlations to one factor and low correlations to other factors. This resulted in a 4-factor solution where the correlations between factors were low and clear differences between factors could be seen.

More sorts could have been included in the factor arrays through the use of a 1% significance threshold. This would have meant that to be included in arrays sorts would have needed a loading above 0.3804 on one factor only. However this led to less distinct, more correlated viewpoints and so was less satisfactory. This method would have had the advantage that arrays would have been based on a weighted average of more sorts, which is the reason why Watts and Stenner (2012) recommend such a criterion. However in this study I felt that on balance it was more important to maximise the distinctness of viewpoints. The thresholds of 0.5 and 0.3 were chosen because they led to each factor having at least three defining sorts.

7. Evaluation

This evaluation is organised according to quantitative and qualitative research criteria identified in section 3.7, with a third section discussing the suitability of Q methodology

7.1 Quantitative Research Criteria (Validity)

In section 3.7.1 I argued that of the traditional quantitative research criteria, only validity could be applied to Q methodology, and that within a critical realism position, the question of whether a Q sort really represents a participants' position is a useful one to ask.

One threat to validity identified was that the participants would not understand the Q set in English, with the result that their response would not reflect their viewpoint. Measures were taken in the procedure to ensure understanding, with Q sorts only being included where good understanding was demonstrated. In addition, feedback from participants also indicated that only a small number of items were misunderstood. While the level of understanding is clearly a matter of interpretation, I would argue that it would not be possible to have objective criteria for deciding whether a participant had understood the Q set. The literature on Q methodology states that a participant's response to an item is based on their personal understanding of the item (Wolf, 2009), and so it would not be desirable that participants understood each item in the same way. The best possible outcome may be to be open about how understanding was checked, so that readers of this research can incorporate this point in their interpretation of the study.

An additional area of uncertainty was whether participants would be able to handle the task sufficiently well to convey their viewpoint. As mentioned in section 4.1, the Q sorts for two participants were removed from the analysis because they were clearly not making the effort to do the task properly. Apart from the issue of the level of effort, there was some variability in how much the participants seemed to be thinking carefully about the items and placing them in the grid. It was noticeable that older participants seemed to take more pride in their viewpoint and would rearrange more carefully so that the relative positions of the items were correct for them. All participants were asked to check adjacent columns after finishing their response and some rearrangement occurred for all participants.

Perhaps the best evidence that participants were able to convey their point of view comes in the emergence of shared viewpoints. The four factors combined accounted for 41% of the variance in the study, which is acceptable by commonly-used standards. Kline (1994) (cited in Watts & Stenner, 2012) states that 35-40% is indicative of an acceptable solution. It seems very unlikely that the factors would have accounted for this level of variance if the participants had not understood the Q set or not been able to express their viewpoint. However these factors could have prevented the variance accounted for from being higher.

Even with shared viewpoints emerging, it is important to acknowledge that a participant's viewpoint is a response to the whole situation in which the Q sorting procedure took place. Different responses may have been elicited if the procedure had been administered by peers rather than myself, an unknown adult.

Answers to the post-sort questionnaire give some information on the questions of what precisely the participants' responses are a viewpoint on. There is an indication that the viewpoints concern strategies which are helpful mostly for students in the early stages of learning English. In addition the viewpoints seem to be based on a mixture of participants' direct experience and their hypothesising about how helpful strategies might be.

7.2 Qualitative research criteria

Many of Elliott et. al.'s (1999) qualitative research criteria (see section 3.7.2) were addressed through the design of the method and through openness about my own positionality in this thesis. A few further points can be made in the light of the results and discussion. The fourth criterion, 'providing credibility checks' depended on the finding of shared viewpoints, which were indeed found. This would be unlikely if the Q sorting process had not captured something important. The fifth criterion, 'coherence', seemed to be addressed well by the four viewpoints. Through analysing how the viewpoints contrasted with each other, it was possible to identify the important issues defining the conceptual space which contained all of the viewpoints.

Providing verbatim post-sort comments may have been one way to more fully meet some of the qualitative criteria. As part of the process of checking that participants had understood the Q set, they were asked to explain some of their ratings of items, but their responses were not recorded. These comments would have helped to meet the criterion of 'Grounding in examples', by quoting the views of participants who exemplified a factor. The criterion of 'Resonating with readers' may also have been further strengthened by the use of comments which gave an insight into how viewpoints relate to a young person's specific circumstances.

7.3 Strengths of Q methodology in the current study

One of the advantages of using Q methodology over purely qualitative methods was that it allowed a larger group of participants, leading to more diversity. The level of diversity within the P set was high for most of the variables for which contextual information was collected. 18 different languages were included, and there was also variation in how long participants had been learning English and how long they had been in the country. Participants were also drawn from schools with high and low levels of linguistic diversity (between 4% and 21% of the population classified as EAL). An age range spanning 9 year groups was covered, although it was harder to recruit participants in the early secondary years (year groups 7 and 8), possibly because school staff were less familiar with recently arrived pupils.

The decision to use two thresholds for including a sort in a factor interpretation (0.5 loading with no other loading above 0.3) increased the difference between the

resulting viewpoints, with the result that more of a divergence of views was present in the results. Analyses run with a single threshold for including sorts led to higher correlations between factors, and to viewpoints which were more similar to each other. It therefore seems that the use of two thresholds helped to achieve the aim of presenting a plurality of viewpoints.

In the current study Q methodology was used with a single group of participants and a single condition of instruction. This led to comparatively general findings, and different applications of the methodology could have been used to explore viewpoints of particular groups of participants or viewpoints relating to more specific situations. For example, the condition of the instruction for the Q sort could be altered to refer to newly-arrived students or students with well-developed proficiency in English. The current study also dealt with participants as a single group, whereas with more time and participants available it would be interesting to compare the viewpoints of recent immigrants and young people who have lived in the UK all their lives, but have used languages other than English prior to their schooling.

7.4 Limitations of Q methodology in the current study

While the study was able to elicit participant viewpoints, there are a number of ways in which the use of Q methodology limited the views that participants could express. Any Q sort is based on a question which is asked through the condition of instruction, which for this study was:

“Adults do many things to help bilingual students at school. Please look at these ideas. Put them in columns to show how helpful or unhelpful you think they are. Make the same shape as the grey grid.”

Several aspects of this invitation to express a viewpoint are fixed by me, the researcher, when participants may disagree with assumptions expressed by the invitation. The category of ‘bilingual students’ is presented to participants, when they may construct groups of students differently. Other assumptions are that adults play the active role by ‘helping’ EAL students, and that their actions should be evaluated according on a ‘helpful’ to ‘unhelpful’ continuum. For participants to be able to challenge these assumptions, a more open-ended methodology such as Interpretative Phenomenological Analysis or Discourse Analysis would be more suitable.

While the Q set was produced collaboratively through focus groups and piloting with students with EAL, once the participants were completing the Q set it was not possible for them to negotiate or change the statements. A further potential criticism is that there was no participant input in the analysis and interpretation stage of the study. A methodology involving open-ended conversations between participants and researcher would have allowed further opportunities for participants to contribute to interpretation of their views that was produced.

Difficult for young people. Some negative comments

However, a number of factors limited diversity among participants. Primarily, schools found that the proportion of consent forms that were received from parents was fairly low, and it seems likely that families where parents were not fluent English-speakers would have been less likely to respond. This would have led to fewer participants coming from a home background with little English spoken. Secondly, despite the efforts of myself and school staff to recruit more male participants, the P set was mostly female (23 out of 30 participants). This may have been because female students felt more positive about the role of a helpful volunteer due to existing social constructions relating to gender. In two instances a participant's data had to be excluded because they were clearly not taking the task seriously and in both cases these students were male. One other limit to the diversity in the sample was that no school had a large minority of one language. It is possible that students would be more positive about their first language in such a situation.

Although I was able to ascertain that the included participants understood at least a very large majority of the statements, there are a few occasions when conversations with participants revealed a misunderstanding of statements. Doing the task in a language other than their first language complicated the task for some of the participants, making it harder for them to express their viewpoint. The difficulty of participants coming from different backgrounds is hard to resolve within Q methodology. One solution might be to translate the Q set into many different languages, but direct comparisons between translated Q sets would be questionable.

Using Q methodology also made it difficult to include some teaching strategies which require more explanation than is possible in a card-sorting item. For example, instructional conversation has been researched as a strategy which could be especially effective for students with EAL (Gibbons, 2003). However this strategy was hard to explain on a single card, and it may have been easier to get students' opinions within a focus group.

In the current study Q methodology was used with a single group of participants and a single condition of instruction. This led to comparatively general findings, and different applications of the methodology could have been used to explore viewpoints of particular groups of participants or viewpoints relating to more specific situations. For example, the condition of the instruction for the Q sort could be altered to refer to newly-arrived students or students with well-developed proficiency in English. The current study also dealt with participants as a single group, whereas with more time and participants available it would be interesting to compare the viewpoints of recent immigrants and young people who have lived in the UK all their lives, but have used languages other than English prior to their schooling.

8. Future Directions

8.1 Future Research

Within the current study Q methodology provided a way for pupils to express their viewpoint, and could in the future be used to address more specific questions. For example, it may be informative to use a similar task where the condition of instruction is altered to ask participants to think about students beginning to learn English or students who are already quite proficient in English.

The study could also be extended by altering the scope of the Q set, which in the current study covers a broad topic area. This had the advantage of allowing a comparison between types of support, for example the comparison between academic and social support. A way to extend the study may be to focus on a narrower area, enabling more fine-grained distinctions to be made by participants. Some of the responses to the question in the post-sort questionnaire about missing items were ideas which were subtly different to the items in the Q set. For example, one student suggested the idea “To watch films with subtitles, so you learn faster”, which was quite similar to item 7, about providing bilingual books and DVDs. A narrower topic area with subtle distinctions between items would have allowed participants to say more precisely what adults should do.

One of the most productive areas for future research would be the negative views held by some students with EAL about using their first language. Qualitative research methods could be used to investigate in further depth the reasons for negative views and the experiences which influence these views. There are many suggestions available in the literature about how to increase pride in home languages, but little study of the impact on school life when such interventions are introduced. It would be useful to investigate how much students and staff can influence views of language diversity within a school.

In Section 6.1.6, some hypotheses were suggested about how the age of the participants influenced their viewpoints, with participants within Factors 1 and 3 tending to be older. Research using quantitative methodology (e.g. questionnaire research), representative sampling and a larger sample would be necessary to confirm whether such a generalisation holds across the wider population of students with EAL.

One weakness of the current study was that students in the early stages of learning English were excluded. As a result there remains a gap in the research for such students to express their views through a first language.

8.2 Implications and Recommendations

Viewpoints from the current research gave further support to the use of some strategies which the research literature also endorses. Examples include nurturing students’ sense of belonging, and representing meanings in visual form or other languages as well as English. Agreement between the current research and previous research makes the implementation of these strategies an uncontroversial matter.

More complexity emerges when young people have views which contradict the existing research on strategies that should be used for students with EAL. The most obvious example emerging from the current study is that all viewpoints had either mixed or negative views on the use of students' first languages within schools, whereas the literature on first language use in schools is generally positive.

A number of approaches to managing this discrepancy are possible. Firstly, school staff could give greater weight to individual pupils' views in comparison with the research literature, and accept that students only wish to use English in schools. If such an approach was adopted there would be many other strategies available which would be research-based and also favoured by the individual student. One argument for this approach is that even if there is solid research evidence that students do in general benefit from using their first language, such nomothetic methods may mask considerable variation in individual circumstances. It can not be claimed on this basis that first-language use is beneficial for all students in all contexts, making it less justifiable to override student views.

A second approach, which could be used alongside the first, would be to put in place interventions which led to students feeling more positive about using their first languages in schools. This could involve providing information for students with EAL and their families on the benefits of first language use, as well as supporting students to take pride in their first language in school. Perhaps more important is to develop positive attitudes towards linguistic diversity in the school as a whole so that the peers of students with EAL react positively when they hear a variety of languages. Research shows that an expectation of monolingualism can all too easily become an accepted view which becomes hard to challenge (e.g. Agirdag, 2008). The results of the current study indicate that such an approach is more acceptable to primary-age children.

A final approach would be to continue to use strategies of encouraging first languages to be used in school, in accordance with research findings and government guidance. Consideration of student views would still be beneficial to modify these strategies so that they were more acceptable to students.

The multiple viewpoints found in the current research show that there is significant variation in the views of students with EAL on how they should be supported. This implies that consulting the literature to identify strategies which are generally thought to be effective may lead to mixed results. Instead, consulting students to find out their individual views and negotiating the support which will be put in place is likely to be more effective.

The Q sort task produced through the current research provides one set of materials through which students with EAL can express their viewpoints. The Q sort can be performed by students with EAL, with responses being used as a prompt for discussion among groups of students, or between students with EAL and adults. EAL professionals who helped me in the course of this research also pointed out the value of adults completing the Q sort, and comparing responses with each other, as well as with the

students they teach.

Written descriptions of the four viewpoints found in the research also provide a stimulus for discussion among students with EAL and the staff that work with them. Adaptation or translation of the written descriptions would help to increase accessibility for different age groups and different levels of English proficiency. When the viewpoints are presented as a set to students with EAL, it would be useful to present them alongside viewpoints which are very positive about the use of first languages in schools. These alternative viewpoints could be based on the views of EAL professionals, and having a full range would emphasise to students that a whole spectrum of viewpoints were valid.

As a trainee educational psychologist I am particularly interested in the implications of the research for working with young people who are experiencing difficulties in school. The emerging viewpoints highlight a range of thoughts, feelings and preferences which young people can have about EAL provision. A significant proportion of the work of educational psychologists involves formulating hypotheses for young people's difficulties in school. Several aspects of the viewpoints in the current research could be causal factors with a positive or negative effect on young people's education. These factors are all hypotheses to be explored when working to improve the lives of young people. By way of illustration, some examples of these hypotheses would include:

- The presence or lack of allowances made for a student with EAL (e.g. more time in exams) could be a cause of feelings of unfairness and anger.
- Use of first languages in lessons could allow a student with EAL to access concepts which are only familiar in their first language, and the lack of such a strategy could inhibit academic progress.
- A student's sense of belonging could be threatened both by physical separation from a peer group and events which highlight linguistic or cultural differences with a peer group. The viewpoints in the current study indicate individual differences in how students aim to achieve a sense of belonging (see 6.1.2).
- A student's self-concept could be negatively affected if they identify strongly with a cultural or linguistic group which does not seem to be valued or recognised within a school.

Any such hypotheses could be valuably explored through discussion with the young people themselves, for reasons discussed in Section 2.5. Involving young people would help them to feel empowered and ensure that interventions and support reflected personal constructions the student has about their school environment and themselves. As already mentioned, the Q sort task developed through this research would provide an interesting stimulus for a discussion of how the young person constructed the situation, the support provided and themselves.

In summary, it is hoped that the current research has shown that a number of viewpoints exist among students with EAL about how they should be supported. While research findings based on aggregated results or experience are valuable, it should be recognised that these are generalisations which can not be applied successfully in all situations with all students. Accessing individual student viewpoints will provide a

richer picture of how adults can play a positive role and ensure that students with EAL gain the full benefit from their bilingualism.

9. References

Agirdag, O. (2010). Exploring Bilingualism in a Monolingual School System: Insights from Turkish and Native Students from Belgian Schools. *British Journal of Sociology of Education, 31*(3), 307-321.

Baker, C. (1993). Bilingual Education in Wales. In H. Baetens Beardsmore (Ed.), *European Models of Bilingual Education* (pp. 7-29).

Baker, C. (2006). *Foundations of bilingual education and bilingualism*. Clevedon: Multilingual Matters.

Benet-Martínez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality, 73*(4), 1015–1050.

Benet-Martínez, V., Leu, J., Lee, F., & Morris, M. W. (2002). Negotiating biculturalism. *Journal of Cross-Cultural Psychology, 33*(5), 492.

Berry, J. W. (1990). Psychology of acculturation. In J. Berman (Ed.), *Cross-Cultural Perspectives: Nebraska Symposium on Motivation* (pp. 201-234). Lincoln: University of Nebraska Press.

Bhaskar, R. (1979). *The Possibility of Naturalism*. London: Harvester Wheatcheaf.

Blair, M., & Bourne, J. (1998). *Making the difference: teaching and learning strategies in successful multi-ethnic schools*. London: HMSO.

Bourdieu, P. (1977). The economics of linguistic exchanges. *Social science information, 16*(6), 645–668.

Bourne, J. (2001). Discourses and identities in a multi-lingual primary classroom. *Oxford Review of Education, 27*(1), 103–114.

Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: a research note. *Qualitative research, 8*(1), 137–152.

British Broadcasting Corporation. (2008). British Citizenship Tests Planned. Retrieved from http://news.bbc.co.uk/1/hi/uk_politics/7253933.stm

British Psychological Society. (2009). *Code of Ethics and Conduct*. Leicester: British Psychological Society.

Bronfenbrenner, U. (1979). *The Ecology of Human Development*. Cambridge, MA: Harvard University Press.

Brown, S. R. (1980). *Political Subjectivity: Applications of Q Methodology in Political Science*. New Haven, CT: Yale University Press.

Brown, S. R. (1993). A primer on Q methodology. *Operant subjectivity, 16*(3/4), 91–138.

Brown, S. R. (2008, 10/2/08). Rotation needed or not? [Electronic mailing list message on Q-Method list]. *Q Methodology Network.* from https://listserv.kent.edu/cgi-bin/wa.exe?A0=q-method

Cable, C., Leung, C., & Vazquez, M. (2004). EAL: Induction and withdrawal in secondary schools. *NALDIC Quarterly, 1*(3), 6-11.

Calderón, M., Hertz-Lazarowitz, R., & Slavin, R. (1998). Effects of bilingual cooperative integrated reading and composition on students making the transition from Spanish to English reading. *The Elementary School Journal, 99*(2), 153–165.

Canagarajah, A. S. (1995). Functions of codeswitching in ESL classrooms: Socialising bilingualism in Jaffna. *Journal of Multilingual & Multicultural Development, 16*(3), 173–195.

Chavez, R. C. (1990). The Development of Story Writing Within an IBM Writing to Read

Program Lab Among Language Minority Students. *Computers in the Schools, 7*(1-2), 121–144.

Cline, T., de Abreu, G., Fihosy, C., Gray, H., Lambert, H., & Neale, J. (2002). *Minority Ethnic Pupils in Mainly White Schools*. London: HMSO.

Cockburn, L. (2002). Children and Young People Living in Changing Worlds The Process of Assessing and Understanding the'Third Culture Kid'. *School Psychology International, 23*(4), 475–485.

Cromby, J., & Nightingale, D. J. (1999). What's wrong with social constructionism? In D. J. Nightingale & J. Cromby (Eds.), *Social Constructionist Psychology: a critical analysis of theory and practice* (pp. 1-19). Buckingham: Open University Press.

Cummins, J. (1976). *The Influence of Bilingualism on Cognitive Growth: A Synthesis of Research Findings and Explanatory Hypotheses. Working Papers on Bilingualism, No. 9*. Toronto: The Ontario Institute for Studies in Education.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In California State Department of Education (Ed.), *Schooling and language minority students. A theoretical framework* (pp. 3–49). Los Angeles: California State Department of Education.

Cummins, J. (2000). *Language, power, and pedagogy: Bilingual children in the crossfire*. Clevedon: Multilingual Matters.

Curt, B. (1994). *Textuality and Tectonics. Troubling social and psychological science*. Buckingham: Open University Press.

Darder, A., & Upshur, C. C. (1993). What do Latino children need to succeed in school? A study of four Boston public schools. In R. Rivera & S. Nieot (Eds.), *The education of Latino students in Massachusetts: Issues, research, and policy implication*. Boston: University of Massachusetts.

Davidson, D. (1980). *Essays on actions and events*. Oxford: Oxford University Press.

Department for Education. (1985). *The Swann Report: Education for All*. London: HMSO.

Department for Education. (2010). *The importance of teaching*. London: HMSO.

Department for Education. (2011). *Schools, Pupils and their Characteristics, January 2011*. London: HMSO.

Department for Education and Skills. (2005). *Aiming high: Guidance on the assessment of pupils learning English as an additional language*. London: HMSO.

Department for Education and Skills. (2006). *Excellence and Enjoyment: learning and teaching for bilingual children in the primary years.* London: HMSO.

Department for Education and Skills. (2009). *Ensuring the attainment of more advanced learners of English as an Additional Language.* London: HMSO.

Elliott, R., Fischer, C. T., & Rennie, D. L. (1999). Evolving guidelines for publication of qualitative research studies in psychology and related fields. *British Journal of Clinical Psychology, 38*(3), 215–229.

García, G. E. (1991). Factors influencing the English reading test performance of Spanish-speaking Hispanic children. *Reading Research Quarterly, 26*(4), 371–392.

Giacchino-Baker, R. (1992). Recent Mexican Immigrant Students' Opinions of Their Use and Acquisition of English as a Second Language in an" English Only" American High School: A Qualitative Study. Retrieved from

http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED379910
Gibbons, P. (2003). Mediating language learning: Teacher interactions with ESL students in a content-based classroom. *TESOL Quarterly, 37*(2), 247–273.
Goldman, I. (1990). Abductory Inference, Communication Theory, and Subjective Science. *Electronic Journal of Communication/La Revue Electronique de Communication, 1*(1).
Guttman, L. (1954). Some necessary conditions for common-factor analysis. *Psychometrika, 19*(2), 149–161.
Harding, E., & Atkinson, C. (2009). How EPs record the voice of the child. *Educational Psychology in Practice, 25*(2), 125-137.
Higgins, C. (2010). Rightwing historian Niall Ferguson given school curriculum role. Retrieved from http://www.guardian.co.uk/politics/2010/may/30/niall-ferguson-school-curriculum-role
Hofweber, T. (2012). Logic and Ontology. *The Stanford Encyclopedia of Philosophy.* from http://plato.stanford.edu/archives/sum2012/entries/logic-ontology/
Hornberger, N. (1990). Creating successful learning contexts for bilingual literacy. *The Teachers College Record, 92*(2), 212–229.
Jones, L. C., & Plass, J. L. (2002). Supporting listening comprehension and vocabulary acquisition in French with multimedia annotations. *The Modern Language Journal, 86*(4), 546–561.
Jordan, K., Capdevila, R., & Johnson, S. (2005). Baby or Beauty: A Q study into post pregnancy body image. *Journal of Reproductive and Infant Psychology, 23*(1), 19-31.
Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and psychological measurement, 20*(1), 141-151.
Kenner, C., Ruby, M., Jessel, J., Gregory, E., & Arju, T. (2007). Intergenerational learning between children and grandparents in East London. *Journal of Early Childhood Research, 5*(3), 219–243.
Kline, P. (1994). *An Easy Guide to Factor Analysis*. London: Routledge.
Lambert, W. E. (1975). Culture and language as factors in learning and education. In A Wolfgang (Ed.), *Education of Immigrant Students*. Toronto: Ontario Institute for Studies in Education.
Lucas, T., Henze, R., & Donato, R. (1990). Promoting the success of Latino language-minority students: An exploratory study of six high schools. *Harvard Educational Review, 60*(3), 315–341.
Martin-Jones, M. (2000). Bilingual classroom interaction: A review of recent research. *Language Teaching, 33*(01), 1–9.
McKeown, B., & Thomas, D. (1988). *Q Methodology*. Newbury Park: Sage.
McLeod, B. (1996). School Reform and Student Diversity: Exemplary Schooling for Language Minority Students. NCBE Resource Collection Series No. 4. Retrieved from http://www.eric.ed.gov/PDFS/ED392268.pdf
Mitchell, R., & Brumfit, C. (1997). The national curriculum experience of bilingual pupils. *Educational Review, 49*(2), 159–180.
Office for Standards in Education. (2001). *Inspecting English as an additional language*. London: Ofsted.
Office for Standards in Education. (2004). *Managing the Ethnic Minority Achievement*

Grant. Good practice in secondary schools. London: Ofsted.
Osborne, A. B. (1996). Practice into theory into practice: Culturally relevant pedagogy for students we have marginalized and normalized. *Anthropology & Education Quarterly, 27*(3), 285–314.
Phillipson, R. (1992). ELT: the native speaker's burden? *ELT Journal, 46*(1), 12–18.
Potter, J., & Wetherell, M. (1987). *Discourse and Social Psychology, Beyond Attitudes and Behaviour*. London: Sage.
Powers, S. (2001). From Concepts to Practice in Deaf Education: A United Kingdom Perspective on Inclusion. *Journal of Deaf Studies and Deaf Education, 7*(3), 230-243.
Quinton, A. (1977). Epistemology. In A. Bullock & O. Stallybrass (Eds.), *The Fontana Dictionary of Modern Thought*. London: Fontana.
Ramirez, D. J., Yuen, S. D., & Ramey, D. R. (1991). *Final Report: Longitudinal Study of Structured English Immersion Strategy, Early-Exit and Late-Exit Transitional Bilingual Education Programs for Language-Minority Children. Executive Summary*. San Meteo, CA: Aguirre International.
Robledo Montecel, M., Gallagher, A., Montemayor, A. M., Villarreal, A., Adame-Reyna, N., & Supik, J. D. (1993). *Hispanic families as valued partners: An educator's guide*. San Antonio, TX: Intercultural Development Research Association.
Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of personality and social psychology, 79*(1), 49.
Schmidt, R. (2000). *Language Policy and Identity Policy in the United States*. Philadelphia: Temple University Press.
Schmolck, P. (2002). PQMethod (Version 2.32) [Computer Software]. Retrieved from www.lrz.de/~schmolck/qmethod
Schmolck, P. (2012). PQMethod Manual. Retrieved from http://schmolck.org/qmethod/pqmanual.htm
Schwandt, T. A. (2001). *Dictionary of qualitative inquiry*. Thousand Oaks, CA: Sage.
Scott, D. (2000). *Realism and educational research: new perspectives and possibilities*. London: RoutledgeFalmer.
Skuttnabb-Kangas, T. (2000). Linguistic genocide in education or worldwide diversity and human rights? Mahwah: Lawrence Erlbaum.
South, H. (1999). *The distinctiveness of English as an additional language. A cross-curriculum discipline*. Watford: NALDIC.
Stephenson, W. (1936). The inverted factor technique. *British Journal of Psychology. General Section, 26*(4), 344–361.
Tang, G. (1992). The effect of graphic representation of knowledge structures on ESL reading comprehension. *Studies in Second Language Acquisition, 14*(2), 177–195.
Téllez, K., & Waxman, H. C. (2006). A meta-synthesis of qualitative research on effective teaching practices for English language learners. In J. M. Norris & L. Ortega (Eds.), *Synthesizing research on language learning and teaching* (pp. 245–277).
Valdez Pierce, L., & O'Malley, J. M. (1992). Performance and portfolio assessment for language minority students. NCBE Program Information Guide Series, Number 9. Retrieved from http://www.eric.ed.gov/PDFS/ED346747.pdf

Valdés, G. (1998). The world outside and inside schools: Language and immigrant children. *Educational Researcher, 27*(6), 4–18.

Villar, J. A. (1999). A model for developing academic language proficiency in English language learners through instructional conversations. Retrieved from http://digitalcommons.uconn.edu/dissertations/AAI9926303/

Villarreal, A. (1999). Rethinking the education of English language learners: Transitional bilingual education programs. *Bilingual Research Journal, 23*(1), 11–46.

Walker DeFelix, J., Johnson, R., & Schick, J.-A. (1990). Socio- and Psycholinguistic Considerations in Interactive Video Instruction for Limited English Proficient Students. *Computers in the Schools, 7*(1-2), 173–190.

Watt, N. (2011). David Cameron says that immigrants should learn English. Retrieved from http://www.guardian.co.uk/politics/2011/apr/14/david-cameron-immigrants-learn-english

Watts, S. (2008). Social Constructionism Redefined: Human Selectionism and the Objective Reality of Q Methodology. *Operant Subjectivity, 32*, 29–45.

Watts, S., & Stenner, D. P. (2005). Doing Q methodology: theory, method and interpretation. *Qualitative Research in Psychology, 2*(1), 67–91.

Watts, S., & Stenner, P. (2012). *Doing Q Methodological Research: Theory, Method & Interpretation*. London: Sage.

Waxman, H. C., & Tellez, K. (2002). *Research Synthesis on Effective Teaching Practices for English Language Learners*. Philadelphia, PA: Laboratory for Student Success.

Williams, C. (1996). Secondary education: Teaching in the bilingual situation. In C. Williams, G. Lewis & C. Baker (Eds.), *The Language Policy: Taking Stock.* LLangefni (Wales): Canolfan Astudiaethau Iaith.

Wolf, A. (2009). Subjectivity, the researcher and the researched. *Operant Subjectivity: The International Journal of Q Methodology, 32*, 6-28.

Instructions

Here are 46 sentences. Each one is an idea for helping bilingual students.

Bilingual = you can speak more than one language.
Monolingual = you only speak one language.

First, please put the ideas into 5 piles. You don't need the same number in each pile:

1. Really unhelpful
2. Slightly unhelpful
3. Not unhelpful, not helpful
4. Slightly helpful
5. Really helpful

Please put the cards in columns to show which ones are most unhelpful and which ones are most helpful. Make the same shape as the grey grid.

Start from the edges, putting the ideas you think are most unhelpful in '1' and most helpful in '11'. Then do '2' and '10' and keep going until you get to the middle.

If you can't remember an idea happening, try to imagine how helpful it would be.

There are no right answers, just show me what you think.

Let me know if you don't understand any of the sentences.

Take your time.

You can change your mind and move them around.

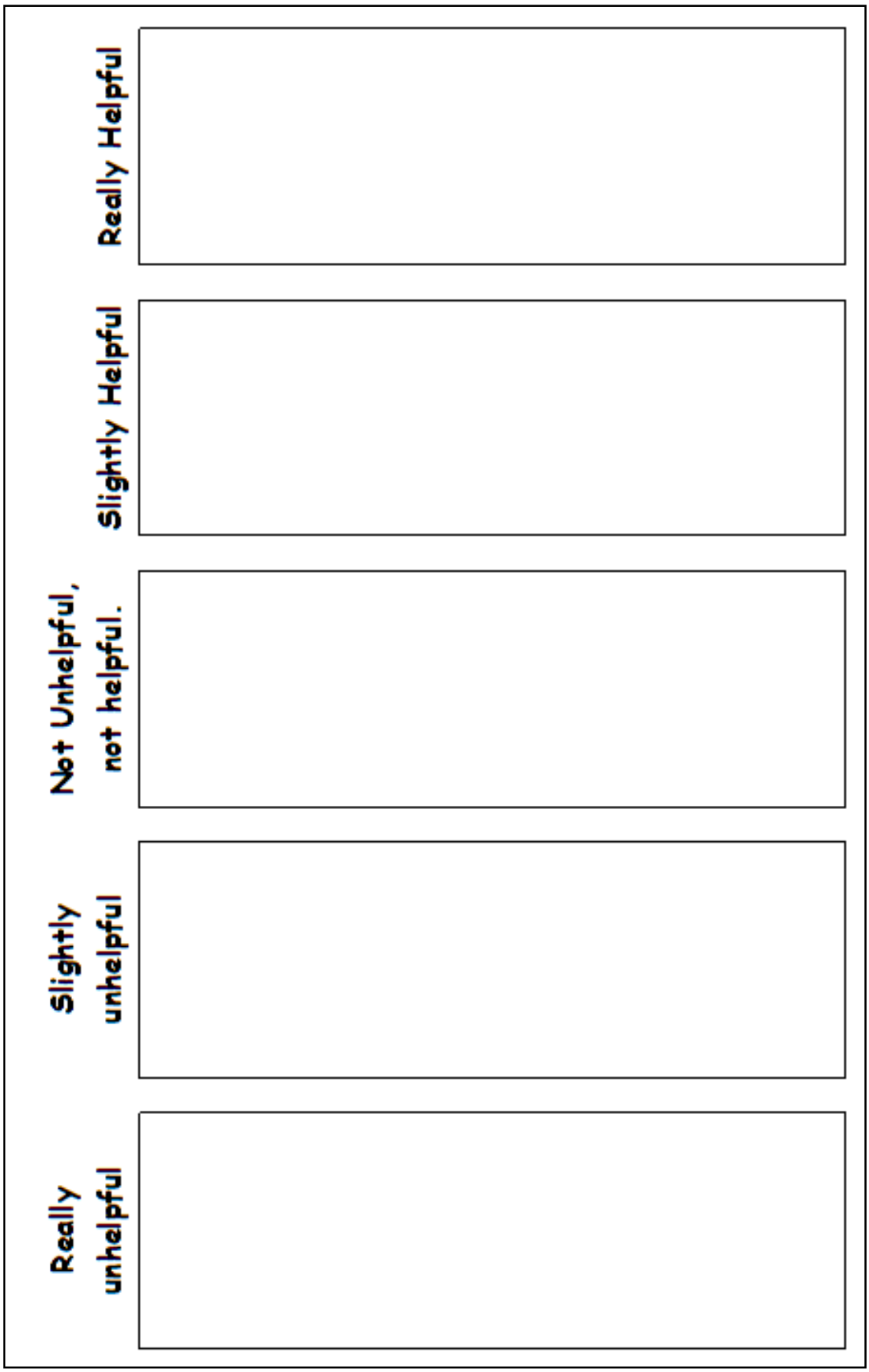
Appendix B: Descriptors for Stages 3 and 4 of EAL proficiency

	Stage 3, Becoming a Confident User of English			Stage 4, Fully fluent in English
	NC Level 4s – 5		NC Levels 6+/ 5 A* - C	

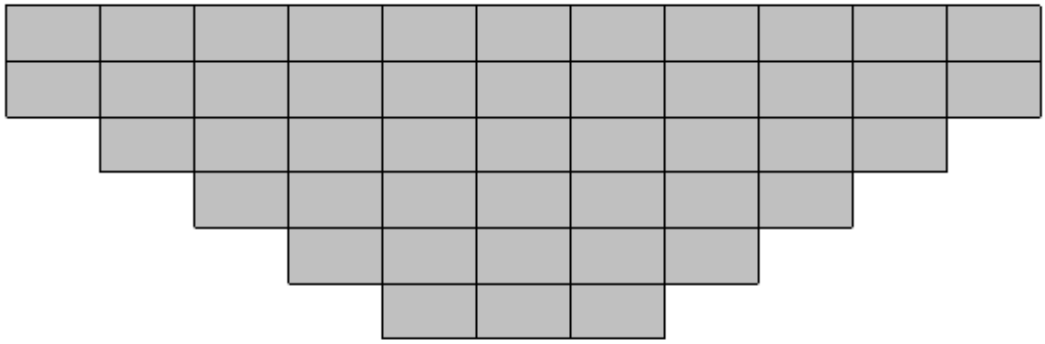
	Early Stage 3	Intermediate Stage 3	Advanced Stage 3	Stage 4
Listening	Pupils are beginning to understand reasoned discussion. They listen attentively to stories, poems, descriptions & narratives. They are able to understand instructions/information in subject-specific context.	Pupils are beginning to understand commentary which contains complex structures & subject-specific language with visual support e.g. television/video/DVD programmes. They listen with a greater span of concentration to more difficult speech/text without visual cues.	Pupils understand reasoned discussion. They are beginning to understand complex explanations from teacher without visual clues. They are beginning to understand metaphors & puns.	Pupils are able to understand discussion, talk, presentation in most complex situations. They are able to take notes. They are confident in participating in peer group discussion.
Speaking	Pupils can talk about texts heard or read. They are beginning to successfully express more complex needs. They are able to convey the gist of message to a third person.	Pupils are beginning to predict outcomes given information. They are beginning to express own opinion appropriately. They are able to relate real or imaginary events e.g. commentary on video/DVD or home experiences.	Pupils have a growing command of syntax in talk. They are developing the ability to tell jokes.	Pupils ask & respond to questions in a range of situations with confidence. They can participate in a presentation e.g. describe the outcome of a group activity/investigation/argument.
Reading	Pupils make effective use of alphabetical index & contents pages. They are becoming independent readers of English. They are beginning to recognise where to write personal information on forms or questionnaires.	Pupils make effective use of dictionary to check meaning. They are able to extract relevant information from simple diagrams, graphs & maps. They are beginning to acquire widening vocabulary from reading stories, poems & factual texts.	Pupils are beginning to follow written instructions in formal situations. They are willing to take risks as independent English readers, but still need support with unfamiliar texts e.g. Science, History, Geography.	Pupils make effective use of dictionary & texts for a variety of purposes. They are able to follow written instructions from text or diagram but still needing support for subject specific language.
Writing	Pupils are beginning to appreciate & use a range of writing genres. They are able to complete simple forms & questionnaires. They are beginning to revise & redraft in discussion with the teacher, other adults or pupils.	Pupils are able to write a simple message/letter from spoken information. They are able to give a written account of an event or experience in chronological order but need support with punctuation, paragraphing etc.	Pupils demonstrate a growing command of syntactic structure & are developing the use of metaphor & pun. They are able to write a clear set of instructions/reports/summaries/ hypotheses. They can put into writing a clear set of information from diagrams, graphs & prints.	Pupils are independent writers in most contexts but still need support in using subtle nuances of metaphor & Anglo-centric, cultural content in poems & literature. They are able to write a description related to an event or personal experience.

Appendix C: Materials for initial sorting of cards into five groups.

The original filled a piece of A3 paper.

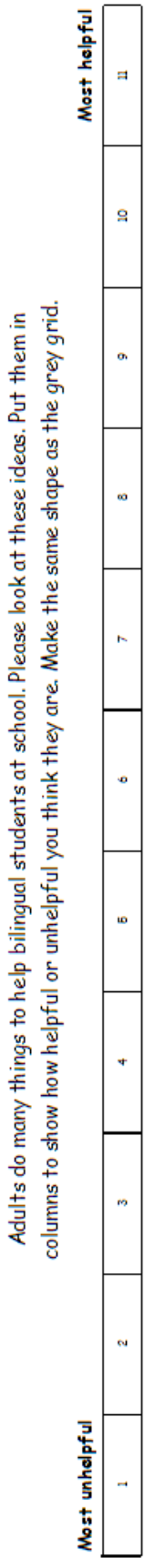


Appendix D: “Grey grid” stimulus used to indicate the correct sorting arrangement.



Appendix E: Column headings

The orginal was printed on two joined pieces of A3 paper.



Questions

Please tell me about how you found the activity. There are no right or wrong answers!

1. Did you remember ideas or just imagine them?

   a) Always remember ☐
   b) Mostly remember ☐
   c) Half and half ☐
   d) Mostly imagine ☐
   e) Always imagine ☐

2. Did you think about students starting to learn English or students already quite good at English?

   a) Always students starting to learn English ☐
   b) Mostly students starting to learn English ☐
   c) Half and half ☐
   d) Mostly students already quite good at English ☐
   e) Always students already quite good at English ☐

3. How did you feel about doing the activity?

4. What other ideas should have been there?

5. Which sentences did you not understand?

Appendix G: Ethical approval letter, consent forms, letter to parents and participant information sheet.

The
School
Of
Education.

Richard Stollery
DEdCPsy

Head of School
Professor Jackie Marsh

Department of Educational Studies
388 Glossop Road
Sheffield
S10 2JA

Telephone: +44 (0)114 222 28180
Email: DEdCPsy @sheffield.ac.uk

4 April 2012

Dear Richard,

ETHICAL APPROVAL LETTER
Opinions of learners with English as an Additional Language

Thank you for submitting your ethics application. I am writing to confirm that your application has now been approved, and you can proceed with your research.

This letter is evidence that your application has been approved and should be included as an Appendix in your final submission.

Good luck with your research.

Yours sincerely

S. A. Warren

Dr Simon Warren
Chair of the School of Education Ethics Review Panel

Participant Consent Form

Title of Project: Opinions of learners with English as an Additional Language.

Name of Researcher (person doing the project): Richard Stollery

Supervisor: Dr. xxxxxxxx xxxxxxxxx, (01xx xxx xxxx)

Participant Number for this project:

Please write your initials in the box

1. I have read the information sheet (with the date 12 September 2012). I understand the sheet. I have had the chance to ask questions. ☐
2. I understand that I don't have to be in the project if I don't want to. I can leave the project at any time with no reason (by ringing 0xxxxxxxxx, or asking an adult to do this). ☐
3. I understand that the researcher will look carefully at the ideas and answers I give. I understand that only the researcher will know which ideas and answers are mine. The project results may be put on a website, or in a book or magazine, but my name will not be with the results. ☐
4. I agree to take part in the sentence sorting activity described in the letter. ☐
5. I agree to take part in the conversation about the activity as described in the letter. ☐

_____	_____	_____
My name	Date	Signed
_____	_____	_____
An adult helping with the form	Date	Signed

(Should be signed with the participant)

_____	_____	_____
Researcher	Date	Signed

Copies:
The participant gets a copy of this form.
The researcher keeps a copy safely.

Date: 12 September 2012 Name of Researcher: Richard Stollery

Participant Information

12 September 2012

Title of Project: Opinions of learners with English as an Additional Language.

Name of Researcher: Richard Stollery (Trainee Educational Psychologist).

I am doing a research project to find out about students who speak another language, and what they think about school. I especially want to know what these students think are the best ways to help them learn in English.

In the stage that I want you to take part in, I will ask students to look at some sentences and say how much they agree or disagree. This will probably take about 25 minutes.

A few months later, I will be asking some students to talk about why they agreed or disagreed with the sentences. This conversation will probably last about 30 minutes. I will record this conversation, and then keep it safely and privately until I have finished the research.

If you want to take part in the project, please sign the form stapled to this paper.

Parent / Legal Representative Consent Form

Title of Project: Opinions of learners with English as an Additional Language.

Name of Researcher: Richard Stollery

Supervisor: Dr. xxxxxxxxxxxxx, (01xx xxxxxxx)

Participant Number for this project:

Please write your initials in the box

4. I confirm that I have read and understood the letter dated *12 September 2012* for the above project. I have had the opportunity to ask questions. ☐

5. I understand that my child taking part is voluntary. I am free to withdraw my child at any time without giving any reason (by ringing 07979 384947). ☐

6. I understand that my child's personal information will be removed from their responses before analysis. I give permission for these anonymised responses to be used and possibly published in the research. ☐

6. I agree for my child to take part in the sentence sorting activity described in the letter. ☐

7. I agree for my child to take part in the conversation about the activity as described in the letter. ☐

_____
Name of child

_____	_____	_____
Name of participant's parent / legal representative	Date	Signature
_____	_____	_____
Researcher	Date	Signature

Copies:

The participant's parent or legal representative receives a copy of the signed and dated participant consent form, the letter and any other written information provided to the participants.

A copy for the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.

Date: 12 September 2012 Name of Researcher: Richard Stollery

University of Sheffield

xxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxx Educational Psychology Service
xxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxx
xxxxxxxxxxxxxx

12 September 2012

Telephone: xxxxxxxxxxxxx
Fax: xxxxxxxxxxx

Dear parent,

In the next few weeks pupils at your child's school will be taking part in a research project about the best ways to help children with English as an Additional Language (EAL) do well in school. I think that being part of the research will help your child to think about their learning in school. The results will also be used to give EAL students in xxxxxxx the best education possible. This letter is to ask for your agreement for your child to take part.

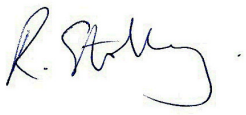
I work for xxxxxxxxxxx as a Trainee Educational Psychologist, and I am doing this research at Sheffield University. I will be coming into the school to ask a group of pupils with EAL about how adults can support them to learn in English. Each student will be given about 45 statements and asked to say how much they agree with each one. This should take about 30 minutes.

Later in the year I will be asking to talk to a small number of the pupils taking part who gave the most interesting answers. I will be recording these conversations and this recording will be kept safely until the research is complete.

If you have any questions about the research or this letter, please contact your child's school or myself on 07xxxxxxxxxxxxx.

If you are happy for your child to take part (in both sorting the statements and a later conversation), please sign the form attached to this letter and bring it in to the school.

Yours faithfully,



Richard Stollery

Trainee Educational Psychologist

Date: 12 September 2012 Name of Researcher: Richard Stollery

Appendix H: Table showing each participant's sorting of each item

		Participants																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Items	1	1	4	3	0	1	-2	-1	-2	-3	2	-1	1	0	1	-1	0	1	-3	-1	0	0	-1	-4	4	4	3	-1	-5	-1	-2
	2	-5	-1	-2	-5	-2	-5	-2	-4	-3	-4	-3	-1	-2	-4	-1	-3	0	2	3	-2	-1	0	-1	-3	-2	-2	-2	0	-3	1
	3	3	-3	3	-3	1	-2	-3	-3	0	-1	1	-2	-1	-1	0	0	-4	-5	1	1	-2	-1	-4	0	-2	2	0	2	-5	-5
	4	-1	3	4	2	-1	3	0	5	0	0	-2	1	0	2	0	1	5	-1	2	-2	1	-1	-3	1	-1	0	1	1	1	-2
	5	-3	-3	5	-5	-5	-3	-4	-5	-3	-4	-4	-1	-3	-3	-2	-4	-5	-4	-1	-2	-5	-5	-5	-3	-3	-5	-4	-2	-5	-3
	6	-4	-2	-3	-4	-1	-5	5	-2	3	-1	4	0	-3	-1	1	-1	-1	-3	-5	-4	-2	-5	0	-2	0	-4	-1	-5	5	4
	7	-4	-4	-4	-2	2	1	-1	-4	-1	4	-2	-5	-2	0	-2	2	2	2	1	0	-3	-4	2	-1	1	-2	-4	-4	-2	4
	8	1	4	2	0	3	-1	1	0	2	-1	-1	4	-4	3	2	1	1	4	-1	-4	1	4	2	3	1	2	3	-2	-1	2
	9	-1	0	0	1	-2	2	-1	-1	0	2	3	-3	4	3	0	1	0	2	2	-1	5	3	-2	4	-2	-3	0	-1	1	0
	10	-2	1	-1	1	-1	-3	-3	2	-1	-1	2	1	0	-3	2	1	-1	-2	1	-1	2	0	-1	1	2	-1	-3	0	-3	-2
	11	-1	2	-1	2	2	4	4	2	-2	1	3	3	2	0	3	5	1	4	1	-4	-3	4	4	-5	3	1	-1	-2	3	1
	12	-1	2	1	2	5	4	0	0	1	-3	-4	3	-1	1	-1	-1	4	0	-2	5	3	3	1	-1	2	0	4	-1	-2	-1
	13	2	-2	2	-3	-3	-2	1	-1	1	-5	0	2	-1	5	-3	-4	1	0	-4	-1	5	0	2	5	5	4	5	4	-1	-1
	14	-2	-1	0	-3	-2	2	2	1	1	1	-2	-2	-1	-2	2	0	-4	-1	3	1	3	0	3	0	-2	-3	3	0	-1	4
	15	0	3	1	1	2	2	-1	3	3	1	-1	0	2	5	-2	2	0	0	-1	3	-1	-2	0	3	1	3	3	-3	3	0
	16	1	0	1	1	-4	-3	-2	1	4	-3	1	1	0	-2	-5	-5	2	-2	-1	-5	-4	-1	0	4	-5	-5	-4	1	-3	-2
	17	1	1	-2	2	0	5	-1	3	2	-2	0	0	3	1	3	0	0	-2	-3	-3	-1	-2	2	0	1	5	2	2	3	2
	18	0	2	5	3	1	1	2	1	-4	-2	0	0	3	4	1	-1	-3	1	2	0	4	4	3	2	0	3	-3	2	5	1
	19	-1	-1	-1	0	0	-1	-2	4	4	2	-1	-1	2	1	0	4	-3	0	2	-1	0	2	-1	-5	-3	3	2	5	2	-1
	20	-2	-4	-4	-1	-3	-1	1	-3	-4	-2	1	-5	-1	-4	2	-1	0	5	5	-1	-4	-2	-2	-1	-4	1	-1	1	1	0
	21	0	2	1	4	-4	0	-3	-2	2	1	-1	-2	-4	-2	-2	-2	0	-4	-2	2	-2	-1	-3	-2	-1	-1	1	-1	1	-4
	22	0	2	4	5	3	0	3	3	1	2	2	2	4	4	2	-5	4	-5	4	0	1	2	5	0	0	-1	1	3	0	3
	23	3	0	2	-1	4	2	3	0	3	3	4	1	2	2	1	-2	3	1	3	5	1	3	0	0	2	1	5	2	1	3
	24	-3	-1	3	-4	-4	-4	-4	-3	-5	-3	-2	-4	-2	2	-1	0	3	-4	-3	-3	-1	0	-4	-2	3	-1	-5	-1	-4	-5
	25	0	0	-3	-2	5	-1	2	2	4	2	3	3	1	-1	-2	2	-1	2	0	4	4	5	-1	3	-1	-1	-2	3	2	1
	26	2	-2	-3	3	-3	-4	-5	-5	-1	-2	-5	-1	-2	-5	-4	-3	-1	-1	-5	-5	3	-3	-1	-4	-5	-3	-3	-2	-2	-3
	27	-4	-3	-2	-2	4	5	-1	-1	-2	0	-3	-2	1	0	3	0	3	-2	-4	4	0	-2	2	1	1	-3	-1	-4	0	-3
	28	1	3	1	-3	0	-1	-4	0	2	-2	-4	1	-1	0	0	-1	2	-2	-3	2	2	3	-3	-2	-3	-2	-2	0	-3	-4
	29	-3	1	0	-2	-3	-3	-2	1	-2	3	0	-3	-3	2	-5	-2	-2	0	-4	0	-5	1	1	0	2	4	-1	0	-4	-1
	30	1	4	3	3	3	4	1	2	1	4	1	4	1	3	3	-3	2	3	-2	1	-1	2	0	1	4	1	1	-3	0	2
	31	5	5	0	4	3	3	1	5	5	3	5	-1	1	-1	5	2	1	-1	4	3	-1	1	3	2	1	2	2	1	3	0
	32	-5	-1	-2	5	-2	0	5	-2	-1	0	-3	-1	-4	-5	-3	-3	-3	-1	2	0	0	2	-5	-3	4	5	4	-4	-2	0
	33	-3	-2	2	4	4	2	3	4	5	0	2	4	5	0	1	4	2	5	4	-2	3	-3	1	-3	-4	-4	0	5	4	3
	34	-1	-4	-4	-1	-1	0	0	-1	-5	-4	0	-3	-3	0	-3	-2	-1	2	-2	-3	2	1	1	2	-2	0	4	-1	0	-2
	35	2	-1	0	-1	0	1	0	1	0	-1	4	0	3	3	4	3	5	1	5	2	2	-4	1	2	-1	-1	1	-1	4	2
	36	2	0	2	1	1	-1	0	0	-1	-1	-2	-2	0	1	1	-1	-2	-3	-2	3	-3	-3	3	-2	0	0	0	1	-2	-3
	37	4	-3	0	0	1	-2	3	1	-3	0	2	0	-5	-4	-1	-2	-2	1	-1	-1	2	2	-2	1	0	1	0	-2	2	1
	38	3	0	-1	-1	-1	0	1	0	0	1	-1	-4	3	-1	0	3	-1	4	0	3	0	-2	-3	3	0	4	-3	1	0	-1
	39	5	1	-1	-2	-2	1	2	4	2	5	0	-4	-2	-1	4	2	-5	1	0	1	-2	1	0	-4	3	1	0	0	2	2
	40	-2	-5	-5	3	2	3	2	3	-2	0	3	2	2	-3	-4	4	-4	3	0	-3	0	1	-1	-1	-3	2	-5	3	2	3
	41	4	1	-3	0	0	1	0	-2	1	4	1	5	1	-3	5	1	-2	-1	0	-2	1	0	-2	1	-1	-4	2	-3	0	-4
	42	2	1	-1	2	2	0	4	2	3	5	5	5	5	2	-1	5	3	3	0	1	-4	-4	4	-1	2	0	2	4	1	5
	43	0	-5	-5	-4	-5	-4	-5	-4	-4	-5	-5	-3	-5	-2	-4	1	-3	3	1	1	1	-3	1	-4	-4	-2	-2	2	-1	-1
	44	4	3	1	1	1	3	-2	-3	-1	1	2	3	4	4	1	3	1	1	3	4	-2	1	4	5	3	-2	1	3	-1	0
	45	-2	-2	-2	-1	0	-2	-3	-1	0	-3	-3	2	0	-2	-3	-4	-2	-3	-3	2	-3	-1	-2	-1	-1	2	-2	-3	-4	5
	46	3	5	4	0	-1	1	4	-1	-2	3	1	2	1	1	4	3	4	0	1	2	4	5	5	2	5	0	3	4	4	1

Appendix I: Extracts from the PQMethod file

Factor Scores with Corresponding Ranks

No.	Statement	No.	Factors 1		2		3		4	
1	A talk about the benefits of being bl	1	0.03	23	1.17	7	-0.82	35	0.12	21
2	Bl s can study their first language in school	2	-1.50	42	-1.48	43	0.39	20	-0.70	36
3	A let bl s speak their first language outside lessons	3	-0.04	25	0.21	17	-1.25	40	0.16	20
4	Bl s use English to talk about work in class	4	-0.14	29	1.07	10	-0.03	24	0.03	24
5	Bl s can speak their first language in front of the cl	5	-1.93	45	-0.34	29	-1.61	46	-2.38	46
6	Bl s leave normal lessons to go to English lessons for	6	0.15	17	-0.89	39	-0.66	33	-1.64	43
7	A buy books or DVDs which say the same thing in two la	7	0.86	12	-0.68	35	1.18	7	-1.74	45
8	A help bl s to get to know their classmates	8	0.57	13	1.28	6	0.86	9	1.55	4
9	A teach difficult words that used in a lesson before l	9	0.08	20	1.16	8	0.66	13	0.01	25
10	A talk to bl s about what work to do at home	10	-0.49	36	-0.58	32	-0.30	26	-0.73	37
11	A explain things using pictures and diagrams, not just	11	0.15	18	-0.85	38	1.49	3	0.62	13
12	A listen to bl s read in English regularly	12	0.33	14	0.19	18	-0.49	30	1.26	6
13	A talk to a class about bullying s because they're bl	13	-1.19	40	1.96	1	-1.12	37	1.60	3
14	A show important words and ideas in a lesson in a bl s	14	0.06	21	-0.39	30	0.71	11	0.10	22
15	A believe that bl s can do well at school	15	0.95	10	1.54	4	0.14	22	0.73	11
16	A let s find their own ways to succeed in school	16	-0.49	35	0.32	16	-1.32	42	-1.73	44
17	A teach bl s new words by pointing to pictures or thin	17	-0.05	27	-0.07	23	-0.40	28	0.86	10
18	A let bl s sit with s who speak English well	18	-0.86	38	1.74	2	0.38	21	0.55	15
19	A give bl s more time to do work in class	19	1.01	7	-0.66	34	0.63	16	1.19	7
20	A use computers to translate between different languag	20	-1.44	41	-1.46	42	1.20	6	-0.36	32
21	A know what work bl s can do in their first language	21	-0.07	28	-0.54	31	-1.59	45	-0.13	26
22	A alllow bl s to ask classmates when they don't unders	22	0.96	8	1.32	5	-0.54	32	0.36	17
23	A spend extra time teaching bl s to write in English	23	1.60	4	0.66	13	0.62	17	1.61	2
24	All s discuss different languages in the classroom	24	-1.92	44	0.51	14	-1.58	44	-1.12	39
25	A spend extra time teaching bl s spelling	25	1.72	2	-0.17	27	0.68	12	0.27	19
26	A let bl s talk about classroom tasks in their first l	26	-0.96	39	-1.95	46	-1.51	43	-1.54	42
27	A tell bl s about jobs and university after school	27	0.25	15	-0.13	24	-1.15	38	-1.00	38
28	A give bl s chances to speak Eng with whole class list	28	-0.05	27	-0.15	25	-1.29	41	-0.21	27
29	A put different languages on walls around the school	29	-0.20	31	0.39	15	-0.86	36	0.61	14
30	A are friendly to both bl and English-only s	30	1.32	6	1.13	9	0.07	23	0.68	12
31	A check that bl s can understand instructions	31	1.78	1	0.09	22	0.59	18	0.87	9

Factor Scores with Corresponding Ranks

No.	Statement	No.	Factors 1		2		3		4	
32	A let s who speak the same language sit together in cl	32	-0.45	34	-1.67	45	-0.30	27	1.89	1
33	Bl s get extra time in tests or exams	33	1.37	5	-0.16	26	2.11	1	-1.13	40
34	A tell bl s how they can use ICT to learn	34	-1.67	43	-0.25	28	-0.45	29	0.93	8
35	A show examples of how to do a task using English	35	-0.18	30	0.87	12	1.38	4	-0.62	35
36	A speak the same amount to bl s and English-only s	36	-0.20	32	0.18	19	-1.19	39	-0.49	34
37	A talk to bl s' parents with a person who can translat	37	-0.34	33	-0.64	33	-0.10	25	0.49	16
38	A are able to speak different languages	38	0.04	22	0.10	21	0.86	10	-0.26	30
39	A give bl s easier work when they first start learning	39	0.95	9	-0.90	40	0.66	14	0.32	18
40	A use hand actions or body actions to help bl s unders	40	-0.03	24	-1.40	41	1.34	5	-0.48	33
41	A think about how difficult it is for bl s to use Engl	41	0.89	11	-0.85	37	-0.52	31	-0.26	29
42	A give bl s dictionaries with their first language and	42	1.68	3	0.11	20	1.72	2	-0.27	31
43	Bl s can use their first language during tests or exam	43	-2.27	46	-1.64	44	0.57	19	-1.19	41
44	A give bl s a 'word bank' with useful words	44	0.17	16	1.63	3	0.89	8	0.04	23
45	A try to learn some words of their s' first language	45	-0.55	37	-0.80	36	-0.69	34	-0.23	28
46	A put bl s with a 'buddy' when they first start school	46	0.09	19	1.02	11	0.63	15	1.39	5

Correlations Between Factor Scores

	1	2	3	4
1	1.0000	0.2355	0.4096	0.3163
2	0.2355	1.0000	-0.0206	0.3639
3	0.4096	-0.0206	1.0000	0.1657
4	0.3163	0.3639	0.1657	1.0000

Factor Scores -- For Factor 1

No.	Statement	No.	Z-SCORES
31	A check that bl s can understand instructions	31	1.778
25	A spend extra time teaching bl s spelling	25	1.722
42	A give bl s dictionaries with their first language and Eng	42	1.683
23	A spend extra time teaching bl s to write in English	23	1.602
33	Bl s get extra time in tests or exams	33	1.371
30	A are friendly to both bl and English-only s	30	1.324
19	A give bl s more time to do work in class	19	1.005
22	A alllow bl s to ask classmates when they don't understand	22	0.957
39	A give bl s easier work when they first start learning Eng	39	0.950
15	A believe that bl s can do well at school	15	0.949
41	A think about how difficult it is for bl s to use English	41	0.894
7	A buy books or DVDs which say the same thing in two langs	7	0.861
8	A help bl s to get to know their classmates	8	0.566
12	A listen to bl s read in English regularly	12	0.326
27	A tell bl s about jobs and university after school	27	0.254
44	A give bl s a 'word bank' with useful words	44	0.167
6	Bl s leave normal lessons to go to English lessons for bl s	6	0.152
11	A explain things using pictures and diagrams, not just words	11	0.151
46	A put bl s with a 'buddy' when they first start school	46	0.088
9	A teach difficult words that used in a lesson before lesson	9	0.080
14	A show important words and ideas in a lesson in a bl s fl	14	0.056
38	A are able to speak different languages	38	0.040
1	A talk about the benefits of being bl	1	0.032
40	A use hand actions or body actions to help bl s understand	40	-0.032
3	A let bl s speak their first language outside lessons	3	-0.040
28	A give bl s chances to speak Eng with whole class listening	28	-0.048
17	A teach bl s new words by pointing to pictures or things	17	-0.048
21	A know what work bl s can do in their first language	21	-0.071
4	Bl s use English to talk about work in class	4	-0.143
35	A show examples of how to do a task using English	35	-0.184
29	A put different languages on walls around the school	29	-0.198
36	A speak the same amount to bl s and English-only s	36	-0.200
37	A talk to bl s' parents with a person who can translate	37	-0.335
32	A let s who speak the same language sit together in class	32	-0.446
16	A let s find their own ways to succeed in school	16	-0.486
10	A talk to bl s about what work to do at home	10	-0.486
45	A try to learn some words of their s' first language	45	-0.551
18	A let bl s sit with s who speak English well	18	-0.862
26	A let bl s talk about classroom tasks in their first lang	26	-0.957
13	A talk to a class about bullying s because they're bl	13	-1.188
20	A use computers to translate between different languages	20	-1.435
2	Bl s can study their first language in school	2	-1.499
34	A tell bl s how they can use ICT to learn	34	-1.675
24	All s discuss different languages in the classroom	24	-1.921
5	Bl s can speak their first language in front of the class	5	-1.929
43	Bl s can use their first language during tests or exams	43	-2.272

Factor Scores -- For Factor 2

No.	Statement	No.	Z-SCORES
13	A talk to a class about bullying s because they're bl	13	1.962
18	A let bl s sit with s who speak English well	18	1.741
44	A give bl s a 'word bank' with useful words	44	1.632
15	A believe that bl s can do well at school	15	1.540
22	A alllow bl s to ask classmates when they don't understand	22	1.319
8	A help bl s to get to know their classmates	8	1.285
1	A talk about the benefits of being bl	1	1.173
9	A teach difficult words that used in a lesson before lesson	9	1.159
30	A are friendly to both bl and English-only s	30	1.133
4	Bl s use English to talk about work in class	4	1.073
46	A put bl s with a 'buddy' when they first start school	46	1.021
35	A show examples of how to do a task using English	35	0.872
23	A spend extra time teaching bl s to write in English	23	0.660
24	All s discuss different languages in the classroom	24	0.508
29	A put different languages on walls around the school	29	0.390
16	A let s find their own ways to succeed in school	16	0.318
3	A let bl s speak their first language outside lessons	3	0.209
12	A listen to bl s read in English regularly	12	0.186
36	A speak the same amount to bl s and English-only s	36	0.178
42	A give bl s dictionaries with their first language and Eng	42	0.112
38	A are able to speak different languages	38	0.100
31	A check that bl s can understand instructions	31	0.092
17	A teach bl s new words by pointing to pictures or things	17	-0.075
27	A tell bl s about jobs and university after school	27	-0.126
28	A give bl s chances to speak Eng with whole class listening	28	-0.152
33	Bl s get extra time in tests or exams	33	-0.161
25	A spend extra time teaching bl s spelling	25	-0.169
34	A tell bl s how they can use ICT to learn	34	-0.252
5	Bl s can speak their first language in front of the class	5	-0.341
14	A show important words and ideas in a lesson in a bl s fl	14	-0.390
21	A know what work bl s can do in their first language	21	-0.542
10	A talk to bl s about what work to do at home	10	-0.576
37	A talk to bl s' parents with a person who can translate	37	-0.637
19	A give bl s more time to do work in class	19	-0.657
7	A buy books or DVDs which say the same thing in two langs	7	-0.683
45	A try to learn some words of their s' first language	45	-0.803
41	A think about how difficult it is for bl s to use English	41	-0.846
11	A explain things using pictures and diagrams, not just words	11	-0.852
6	Bl s leave normal lessons to go to English lessons for bl s	6	-0.886
39	A give bl s easier work when they first start learning Eng	39	-0.903
40	A use hand actions or body actions to help bl s understand	40	-1.403
20	A use computers to translate between different languages	20	-1.463
2	Bl s can study their first language in school	2	-1.480
43	Bl s can use their first language during tests or exams	43	-1.638
32	A let s who speak the same language sit together in class	32	-1.675
26	A let bl s talk about classroom tasks in their first lang	26	-1.953

Factor Scores -- For Factor 3

No.	Statement	No.	Z-SCORES
33	Bl s get extra time in tests or exams	33	2.112
42	A give bl s dictionaries with their first language and Eng	42	1.725
11	A explain things using pictures and diagrams, not just words	11	1.487
35	A show examples of how to do a task using English	35	1.382
40	A use hand actions or body actions to help bl s understand	40	1.342
20	A use computers to translate between different languages	20	1.203
7	A buy books or DVDs which say the same thing in two langs	7	1.179
44	A give bl s a 'word bank' with useful words	44	0.893
8	A help bl s to get to know their classmates	8	0.856
38	A are able to speak different languages	38	0.856
14	A show important words and ideas in a lesson in a bl s fl	14	0.712
25	A spend extra time teaching bl s spelling	25	0.682
9	A teach difficult words that used in a lesson before lesson	9	0.663
39	A give bl s easier work when they first start learning Eng	39	0.660
46	A put bl s with a 'buddy' when they first start school	46	0.634
19	A give bl s more time to do work in class	19	0.630
23	A spend extra time teaching bl s to write in English	23	0.622
31	A check that bl s can understand instructions	31	0.585
43	Bl s can use their first language during tests or exams	43	0.566
2	Bl s can study their first language in school	2	0.388
18	A let bl s sit with s who speak English well	18	0.381
15	A believe that bl s can do well at school	15	0.141
30	A are friendly to both bl and English-only s	30	0.070
4	Bl s use English to talk about work in class	4	-0.034
37	A talk to bl s' parents with a person who can translate	37	-0.104
10	A talk to bl s about what work to do at home	10	-0.300
32	A let s who speak the same language sit together in class	32	-0.301
17	A teach bl s new words by pointing to pictures or things	17	-0.399
34	A tell bl s how they can use ICT to learn	34	-0.453
12	A listen to bl s read in English regularly	12	-0.493
41	A think about how difficult it is for bl s to use English	41	-0.523
22	A alllow bl s to ask classmates when they don't understand	22	-0.538
6	Bl s leave normal lessons to go to English lessons for bl s	6	-0.662
45	A try to learn some words of their s' first language	45	-0.688
1	A talk about the benefits of being bl	1	-0.815
29	A put different languages on walls around the school	29	-0.860
13	A talk to a class about bullying s because they're bl	13	-1.120
27	A tell bl s about jobs and university after school	27	-1.148
36	A speak the same amount to bl s and English-only s	36	-1.190
3	A let bl s speak their first language outside lessons	3	-1.253
28	A give bl s chances to speak Eng with whole class listening	28	-1.286
16	A let s find their own ways to succeed in school	16	-1.317
26	A let bl s talk about classroom tasks in their first lang	26	-1.509
24	All s discuss different languages in the classroom	24	-1.579
21	A know what work bl s can do in their first language	21	-1.594
5	Bl s can speak their first language in front of the class	5	-1.609

Factor Scores -- For Factor 4

No.	Statement	No.	Z-SCORES
32	A let s who speak the same language sit together in class	32	1.891
23	A spend extra time teaching bl s to write in English	23	1.606
13	A talk to a class about bullying s because they're bl	13	1.597
8	A help bl s to get to know their classmates	8	1.545
46	A put bl s with a 'buddy' when they first start school	46	1.389
12	A listen to bl s read in English regularly	12	1.255
19	A give bl s more time to do work in class	19	1.188
34	A tell bl s how they can use ICT to learn	34	0.930
31	A check that bl s can understand instructions	31	0.865
17	A teach bl s new words by pointing to pictures or things	17	0.856
15	A believe that bl s can do well at school	15	0.729
30	A are friendly to both bl and English-only s	30	0.677
11	A explain things using pictures and diagrams, not just words	11	0.619
29	A put different languages on walls around the school	29	0.610
18	A let bl s sit with s who speak English well	18	0.555
37	A talk to bl s' parents with a person who can translate	37	0.485
22	A alllow bl s to ask classmates when they don't understand	22	0.358
39	A give bl s easier work when they first start learning Eng	39	0.322
25	A spend extra time teaching bl s spelling	25	0.270
3	A let bl s speak their first language outside lessons	3	0.157
1	A talk about the benefits of being bl	1	0.124
14	A show important words and ideas in a lesson in a bl s fl	14	0.096
44	A give bl s a 'word bank' with useful words	44	0.035
4	Bl s use English to talk about work in class	4	0.029
9	A teach difficult words that used in a lesson before lesson	9	0.009
21	A know what work bl s can do in their first language	21	-0.131
28	A give bl s chances to speak Eng with whole class listening	28	-0.215
45	A try to learn some words of their s' first language	45	-0.227
41	A think about how difficult it is for bl s to use English	41	-0.255
38	A are able to speak different languages	38	-0.262
42	A give bl s dictionaries with their first language and Eng	42	-0.267
20	A use computers to translate between different languages	20	-0.358
40	A use hand actions or body actions to help bl s understand	40	-0.477
36	A speak the same amount to bl s and English-only s	36	-0.488
35	A show examples of how to do a task using English	35	-0.619
2	Bl s can study their first language in school	2	-0.703
10	A talk to bl s about what work to do at home	10	-0.735
27	A tell bl s about jobs and university after school	27	-0.996
24	All s discuss different languages in the classroom	24	-1.118
33	Bl s get extra time in tests or exams	33	-1.127
43	Bl s can use their first language during tests or exams	43	-1.191
26	A let bl s talk about classroom tasks in their first lang	26	-1.542
6	Bl s leave normal lessons to go to English lessons for bl s	6	-1.644
16	A let s find their own ways to succeed in school	16	-1.728
7	A buy books or DVDs which say the same thing in two langs	7	-1.737
5	Bl s can speak their first language in front of the class	5	-2.379

Descending Array of Differences Between Factors 1 and 2

No.	Statement	No.	Type 1	Type 2	Difference
25	A spend extra time teaching bl s spelling	25	1.722	-0.169	1.891
39	A give bl s easier work when they first start learning Eng	39	0.950	-0.903	1.853
41	A think about how difficult it is for bl s to use English	41	0.894	-0.846	1.740
31	A check that bl s can understand instructions	31	1.778	0.092	1.686
19	A give bl s more time to do work in class	19	1.005	-0.657	1.662
42	A give bl s dictionaries with their first language and Eng	42	1.683	0.112	1.571
7	A buy books or DVDs which say the same thing in two langs	7	0.861	-0.683	1.544
33	Bl s get extra time in tests or exams	33	1.371	-0.161	1.532
40	A use hand actions or body actions to help bl s understand	40	-0.032	-1.403	1.370
32	A let s who speak the same language sit together in class	32	-0.446	-1.675	1.229
6	Bl s leave normal lessons to go to English lessons for bl s	6	0.152	-0.886	1.038
11	A explain things using pictures and diagrams, not just words	11	0.151	-0.852	1.003
26	A let bl s talk about classroom tasks in their first lang	26	-0.957	-1.953	0.997
23	A spend extra time teaching bl s to write in English	23	1.602	0.660	0.943
21	A know what work bl s can do in their first language	21	-0.071	-0.542	0.471
14	A show important words and ideas in a lesson in a bl s fl	14	0.056	-0.390	0.446
27	A tell bl s about jobs and university after school	27	0.254	-0.126	0.380
37	A talk to bl s' parents with a person who can translate	37	-0.335	-0.637	0.301
45	A try to learn some words of their s' first language	45	-0.551	-0.803	0.253
30	A are friendly to both bl and English-only s	30	1.324	1.133	0.191
12	A listen to bl s read in English regularly	12	0.326	0.186	0.139
28	A give bl s chances to speak Eng with whole class listening	28	-0.048	-0.152	0.104
10	A talk to bl s about what work to do at home	10	-0.486	-0.576	0.090
20	A use computers to translate between different languages	20	-1.435	-1.463	0.028
17	A teach bl s new words by pointing to pictures or things	17	-0.048	-0.075	0.027
2	Bl s can study their first language in school	2	-1.499	-1.480	-0.019
38	A are able to speak different languages	38	0.040	0.100	-0.060
3	A let bl s speak their first language outside lessons	3	-0.040	0.209	-0.250
22	A alllow bl s to ask classmates when they don't understand	22	0.957	1.319	-0.363
36	A speak the same amount to bl s and English-only s	36	-0.200	0.178	-0.378
29	A put different languages on walls around the school	29	-0.198	0.390	-0.589
15	A believe that bl s can do well at school	15	0.949	1.540	-0.591
43	Bl s can use their first language during tests or exams	43	-2.272	-1.638	-0.634
8	A help bl s to get to know their classmates	8	0.566	1.285	-0.719
16	A let s find their own ways to succeed in school	16	-0.486	0.318	-0.804

Descending Array of Differences Between Factors 1 and 2 (cont.)

No.	Statement	No.	Type 1	Type 2	Difference
46	A put bl s with a 'buddy' when they first start school	46	0.088	1.021	-0.933
35	A show examples of how to do a task using English	35	-0.184	0.872	-1.055
9	A teach difficult words that used in a lesson before lesson	9	0.080	1.159	-1.078
1	A talk about the benefits of being bl	1	0.032	1.173	-1.141
4	Bl s use English to talk about work in class	4	-0.143	1.073	-1.216
34	A tell bl s how they can use ICT to learn	34	-1.675	-0.252	-1.423
44	A give bl s a 'word bank' with useful words	44	0.167	1.632	-1.465
5	Bl s can speak their first language in front of the class	5	-1.929	-0.341	-1.588
24	All s discuss different languages in the classroom	24	-1.921	0.508	-2.429
18	A let bl s sit with s who speak English well	18	-0.862	1.741	-2.603
13	A talk to a class about bullying s because they're bl	13	-1.188	1.962	-3.150

Descending Array of Differences Between Factors 1 and 3

No.	Statement	No.	Type 1	Type 3	Difference
21	A know what work bl s can do in their first language	21	-0.071	-1.594	1.523
22	A alllow bl s to ask classmates when they don't understand	22	0.957	-0.538	1.494
41	A think about how difficult it is for bl s to use English	41	0.894	-0.523	1.417
27	A tell bl s about jobs and university after school	27	0.254	-1.148	1.403
30	A are friendly to both bl and English-only s	30	1.324	0.070	1.253
28	A give bl s chances to speak Eng with whole class listening	28	-0.048	-1.286	1.238
3	A let bl s speak their first language outside lessons	3	-0.040	-1.253	1.213
31	A check that bl s can understand instructions	31	1.778	0.585	1.193
25	A spend extra time teaching bl s spelling	25	1.722	0.682	1.040
36	A speak the same amount to bl s and English-only s	36	-0.200	-1.190	0.990
23	A spend extra time teaching bl s to write in English	23	1.602	0.622	0.980
1	A talk about the benefits of being bl	1	0.032	-0.815	0.847
16	A let s find their own ways to succeed in school	16	-0.486	-1.317	0.831
12	A listen to bl s read in English regularly	12	0.326	-0.493	0.819
6	Bl s leave normal lessons to go to English lessons for bl s	6	0.152	-0.662	0.813
15	A believe that bl s can do well at school	15	0.949	0.141	0.807
29	A put different languages on walls around the school	29	-0.198	-0.860	0.661

Descending Array of Differences Between Factors 1 and 3 (cont.)

No.	Statement	No.	Type 1	Type 3	Difference
26	A let bl s talk about classroom tasks in their first lang	26	-0.957	-1.509	0.552
19	A give bl s more time to do work in class	19	1.005	0.630	0.375
17	A teach bl s new words by pointing to pictures or things	17	-0.048	-0.399	0.351
39	A give bl s easier work when they first start learning Eng	39	0.950	0.660	0.290
45	A try to learn some words of their s' first language	45	-0.551	-0.688	0.138
42	A give bl s dictionaries with their first language and Eng	42	1.683	1.725	-0.042
13	A talk to a class about bullying s because they're bl	13	-1.188	-1.120	-0.068
4	Bl s use English to talk about work in class	4	-0.143	-0.034	-0.110
32	A let s who speak the same language sit together in class	32	-0.446	-0.301	-0.145
10	A talk to bl s about what work to do at home	10	-0.486	-0.300	-0.186
37	A talk to bl s' parents with a person who can translate	37	-0.335	-0.104	-0.231
8	A help bl s to get to know their classmates	8	0.566	0.856	-0.291
7	A buy books or DVDs which say the same thing in two langs	7	0.861	1.179	-0.318
5	Bl s can speak their first language in front of the class	5	-1.929	-1.609	-0.320
24	All s discuss different languages in the classroom	24	-1.921	-1.579	-0.343
46	A put bl s with a 'buddy' when they first start school	46	0.088	0.634	-0.546
9	A teach difficult words that used in a lesson before lesson	9	0.080	0.663	-0.583
14	A show important words and ideas in a lesson in a bl s fl	14	0.056	0.712	-0.656
44	A give bl s a 'word bank' with useful words	44	0.167	0.893	-0.726
33	Bl s get extra time in tests or exams	33	1.371	2.112	-0.742
38	A are able to speak different languages	38	0.040	0.856	-0.816
34	A tell bl s how they can use ICT to learn	34	-1.675	-0.453	-1.222
18	A let bl s sit with s who speak English well	18	-0.862	0.381	-1.243
11	A explain things using pictures and diagrams, not just words	11	0.151	1.487	-1.335
40	A use hand actions or body actions to help bl s understand	40	-0.032	1.342	-1.375
35	A show examples of how to do a task using English	35	-0.184	1.382	-1.566
2	Bl s can study their first language in school	2	-1.499	0.388	-1.887
20	A use computers to translate between different languages	20	-1.435	1.203	-2.638
43	Bl s can use their first language during tests or exams	43	-2.272	0.566	-2.839

Descending Array of Differences Between Factors 1 and 4

No.	Statement	No.	Type 1	Type 4	Difference
7	A buy books or DVDs which say the same thing in two langs	7	0.861	-1.737	2.598
33	Bl s get extra time in tests or exams	33	1.371	-1.127	2.498
42	A give bl s dictionaries with their first language and Eng	42	1.683	-0.267	1.950
6	Bl s leave normal lessons to go to English lessons for bl s	6	0.152	-1.644	1.796
25	A spend extra time teaching bl s spelling	25	1.722	0.270	1.451
27	A tell bl s about jobs and university after school	27	0.254	-0.996	1.250
16	A let s find their own ways to succeed in school	16	-0.486	-1.728	1.242
41	A think about how difficult it is for bl s to use English	41	0.894	-0.255	1.149
31	A check that bl s can understand instructions	31	1.778	0.865	0.913
30	A are friendly to both bl and English-only s	30	1.324	0.677	0.647
39	A give bl s easier work when they first start learning Eng	39	0.950	0.322	0.628
22	A alllow bl s to ask classmates when they don't understand	22	0.957	0.358	0.599
26	A let bl s talk about classroom tasks in their first lang	26	-0.957	-1.542	0.586
5	Bl s can speak their first language in front of the class	5	-1.929	-2.379	0.449
40	A use hand actions or body actions to help bl s understand	40	-0.032	-0.477	0.444
35	A show examples of how to do a task using English	35	-0.184	-0.619	0.435
38	A are able to speak different languages	38	0.040	-0.262	0.302
36	A speak the same amount to bl s and English-only s	36	-0.200	-0.488	0.288
10	A talk to bl s about what work to do at home	10	-0.486	-0.735	0.248
15	A believe that bl s can do well at school	15	0.949	0.729	0.220
28	A give bl s chances to speak Eng with whole class listening	28	-0.048	-0.215	0.167
44	A give bl s a 'word bank' with useful words	44	0.167	0.035	0.132
9	A teach difficult words that used in a lesson before lesson	9	0.080	0.009	0.071
21	A know what work bl s can do in their first language	21	-0.071	-0.131	0.060
23	A spend extra time teaching bl s to write in English	23	1.602	1.606	-0.004
14	A show important words and ideas in a lesson in a bl s fl	14	0.056	0.096	-0.040
1	A talk about the benefits of being bl	1	0.032	0.124	-0.093
4	Bl s use English to talk about work in class	4	-0.143	0.029	-0.172
19	A give bl s more time to do work in class	19	1.005	1.188	-0.183
3	A let bl s speak their first language outside lessons	3	-0.040	0.157	-0.197
45	A try to learn some words of their s' first language	45	-0.551	-0.227	-0.324
11	A explain things using pictures and diagrams, not just words	11	0.151	0.619	-0.468
2	Bl s can study their first language in school	2	-1.499	-0.703	-0.796
24	All s discuss different languages in the classroom	24	-1.921	-1.118	-0.803
29	A put different languages on walls around the school	29	-0.198	0.610	-0.808

Descending Array of Differences Between Factors 1 and 4 (cont.)

No.	Statement	No.	Type 1	Type 4	Difference
37	A talk to bl s' parents with a person who can translate	37	-0.335	0.485	-0.820
17	A teach bl s new words by pointing to pictures or things	17	-0.048	0.856	-0.904
12	A listen to bl s read in English regularly	12	0.326	1.255	-0.929
8	A help bl s to get to know their classmates	8	0.566	1.545	-0.980
20	A use computers to translate between different languages	20	-1.435	-0.358	-1.078
43	Bl s can use their first language during tests or exams	43	-2.272	-1.191	-1.081
46	A put bl s with a 'buddy' when they first start school	46	0.088	1.389	-1.301
18	A let bl s sit with s who speak English well	18	-0.862	0.555	-1.416
32	A let s who speak the same language sit together in class	32	-0.446	1.891	-2.337
34	A tell bl s how they can use ICT to learn	34	-1.675	0.930	-2.605
13	A talk to a class about bullying s because they're bl	13	-1.188	1.597	-2.785

Descending Array of Differences Between Factors 2 and 3

No.	Statement	No.	Type 2	Type 3	Difference
13	A talk to a class about bullying s because they're bl	13	1.962	-1.120	3.081
24	All s discuss different languages in the classroom	24	0.508	-1.579	2.086
1	A talk about the benefits of being bl	1	1.173	-0.815	1.988
22	A alllow bl s to ask classmates when they don't understand	22	1.319	-0.538	1.857
16	A let s find their own ways to succeed in school	16	0.318	-1.317	1.635
3	A let bl s speak their first language outside lessons	3	0.209	-1.253	1.462
15	A believe that bl s can do well at school	15	1.540	0.141	1.399
36	A speak the same amount to bl s and English-only s	36	0.178	-1.190	1.367
18	A let bl s sit with s who speak English well	18	1.741	0.381	1.360
5	Bl s can speak their first language in front of the class	5	-0.341	-1.609	1.268
29	A put different languages on walls around the school	29	0.390	-0.860	1.250
28	A give bl s chances to speak Eng with whole class listening	28	-0.152	-1.286	1.134
4	Bl s use English to talk about work in class	4	1.073	-0.034	1.106
30	A are friendly to both bl and English-only s	30	1.133	0.070	1.063
21	A know what work bl s can do in their first language	21	-0.542	-1.594	1.052
27	A tell bl s about jobs and university after school	27	-0.126	-1.148	1.022

Descending Array of Differences Between Factors 2 and 3 (cont.)

No.	Statement	No.	Type 2	Type 3	Difference
44	A give bl s a 'word bank' with useful words	44	1.632	0.893	0.739
12	A listen to bl s read in English regularly	12	0.186	-0.493	0.679
9	A teach difficult words that used in a lesson before lesson	9	1.159	0.663	0.496
8	A help bl s to get to know their classmates	8	1.285	0.856	0.429
46	A put bl s with a 'buddy' when they first start school	46	1.021	0.634	0.387
17	A teach bl s new words by pointing to pictures or things	17	-0.075	-0.399	0.325
34	A tell bl s how they can use ICT to learn	34	-0.252	-0.453	0.200
23	A spend extra time teaching bl s to write in English	23	0.660	0.622	0.038
45	A try to learn some words of their s' first language	45	-0.803	-0.688	-0.115
6	Bl s leave normal lessons to go to English lessons for bl s	6	-0.886	-0.662	-0.225
10	A talk to bl s about what work to do at home	10	-0.576	-0.300	-0.276
41	A think about how difficult it is for bl s to use English	41	-0.846	-0.523	-0.323
26	A let bl s talk about classroom tasks in their first lang	26	-1.953	-1.509	-0.445
31	A check that bl s can understand instructions	31	0.092	0.585	-0.494
35	A show examples of how to do a task using English	35	0.872	1.382	-0.510
37	A talk to bl s' parents with a person who can translate	37	-0.637	-0.104	-0.533
38	A are able to speak different languages	38	0.100	0.856	-0.756
25	A spend extra time teaching bl s spelling	25	-0.169	0.682	-0.851
14	A show important words and ideas in a lesson in a bl s fl	14	-0.390	0.712	-1.102
19	A give bl s more time to do work in class	19	-0.657	0.630	-1.287
32	A let s who speak the same language sit together in class	32	-1.675	-0.301	-1.374
39	A give bl s easier work when they first start learning Eng	39	-0.903	0.660	-1.564
42	A give bl s dictionaries with their first language and Eng	42	0.112	1.725	-1.613
7	A buy books or DVDs which say the same thing in two langs	7	-0.683	1.179	-1.862
2	Bl s can study their first language in school	2	-1.480	0.388	-1.868
43	Bl s can use their first language during tests or exams	43	-1.638	0.566	-2.204
33	Bl s get extra time in tests or exams	33	-0.161	2.112	-2.273
11	A explain things using pictures and diagrams, not just words	11	-0.852	1.487	-2.338
20	A use computers to translate between different languages	20	-1.463	1.203	-2.666
40	A use hand actions or body actions to help bl s understand	40	-1.403	1.342	-2.745

Descending Array of Differences Between Factors 2 and 4

No.	Statement	No.	Type 2	Type 4	Difference
16	A let s find their own ways to succeed in school	16	0.318	-1.728	2.046
5	Bl s can speak their first language in front of the class	5	-0.341	-2.379	2.037
24	All s discuss different languages in the classroom	24	0.508	-1.118	1.626
44	A give bl s a 'word bank' with useful words	44	1.632	0.035	1.597
35	A show examples of how to do a task using English	35	0.872	-0.619	1.491
18	A let bl s sit with s who speak English well	18	1.741	0.555	1.186
9	A teach difficult words that used in a lesson before lesson	9	1.159	0.009	1.150
7	A buy books or DVDs which say the same thing in two langs	7	-0.683	-1.737	1.054
1	A talk about the benefits of being bl	1	1.173	0.124	1.049
4	Bl s use English to talk about work in class	4	1.073	0.029	1.044
33	Bl s get extra time in tests or exams	33	-0.161	-1.127	0.966
22	A alllow bl s to ask classmates when they don't understand	22	1.319	0.358	0.962
27	A tell bl s about jobs and university after school	27	-0.126	-0.996	0.870
15	A believe that bl s can do well at school	15	1.540	0.729	0.811
6	Bl s leave normal lessons to go to English lessons for bl s	6	-0.886	-1.644	0.758
36	A speak the same amount to bl s and English-only s	36	0.178	-0.488	0.666
30	A are friendly to both bl and English-only s	30	1.133	0.677	0.456
42	A give bl s dictionaries with their first language and Eng	42	0.112	-0.267	0.379
13	A talk to a class about bullying s because they're bl	13	1.962	1.597	0.365
38	A are able to speak different languages	38	0.100	-0.262	0.362
10	A talk to bl s about what work to do at home	10	-0.576	-0.735	0.158
28	A give bl s chances to speak Eng with whole class listening	28	-0.152	-0.215	0.063
3	A let bl s speak their first language outside lessons	3	0.209	0.157	0.053
29	A put different languages on walls around the school	29	0.390	0.610	-0.219
8	A help bl s to get to know their classmates	8	1.285	1.545	-0.260
46	A put bl s with a 'buddy' when they first start school	46	1.021	1.389	-0.368
26	A let bl s talk about classroom tasks in their first lang	26	-1.953	-1.542	-0.411
21	A know what work bl s can do in their first language	21	-0.542	-0.131	-0.411
25	A spend extra time teaching bl s spelling	25	-0.169	0.270	-0.440
43	Bl s can use their first language during tests or exams	43	-1.638	-1.191	-0.447
14	A show important words and ideas in a lesson in a bl s fl	14	-0.390	0.096	-0.486
45	A try to learn some words of their s' first language	45	-0.803	-0.227	-0.576
41	A think about how difficult it is for bl s to use English	41	-0.846	-0.255	-0.591
31	A check that bl s can understand instructions	31	0.092	0.865	-0.774
2	Bl s can study their first language in school	2	-1.480	-0.703	-0.777

Descending Array of Differences Between Factors 2 and 4

No.	Statement	No.	Type 2	Type 4	Difference
40	A use hand actions or body actions to help bl s understand	40	-1.403	-0.477	-0.926
17	A teach bl s new words by pointing to pictures or things	17	-0.075	0.856	-0.931
23	A spend extra time teaching bl s to write in English	23	0.660	1.606	-0.947
12	A listen to bl s read in English regularly	12	0.186	1.255	-1.069
20	A use computers to translate between different languages	20	-1.463	-0.358	-1.105
37	A talk to bl s' parents with a person who can translate	37	-0.637	0.485	-1.122
34	A tell bl s how they can use ICT to learn	34	-0.252	0.930	-1.182
39	A give bl s easier work when they first start learning Eng	39	-0.903	0.322	-1.226
11	A explain things using pictures and diagrams, not just words	11	-0.852	0.619	-1.471
19	A give bl s more time to do work in class	19	-0.657	1.188	-1.845
32	A let s who speak the same language sit together in class	32	-1.675	1.891	-3.566

Descending Array of Differences Between Factors 3 and 4

No.	Statement	No.	Type 3	Type 4	Difference
33	Bl s get extra time in tests or exams	33	2.112	-1.127	3.239
7	A buy books or DVDs which say the same thing in two langs	7	1.179	-1.737	2.916
35	A show examples of how to do a task using English	35	1.382	-0.619	2.001
42	A give bl s dictionaries with their first language and Eng	42	1.725	-0.267	1.992
40	A use hand actions or body actions to help bl s understand	40	1.342	-0.477	1.819
43	Bl s can use their first language during tests or exams	43	0.566	-1.191	1.757
20	A use computers to translate between different languages	20	1.203	-0.358	1.560
38	A are able to speak different languages	38	0.856	-0.262	1.118
2	Bl s can study their first language in school	2	0.388	-0.703	1.091
6	Bl s leave normal lessons to go to English lessons for bl s	6	-0.662	-1.644	0.982
11	A explain things using pictures and diagrams, not just words	11	1.487	0.619	0.868
44	A give bl s a 'word bank' with useful words	44	0.893	0.035	0.858
5	Bl s can speak their first language in front of the class	5	-1.609	-2.379	0.770
9	A teach difficult words that used in a lesson before lesson	9	0.663	0.009	0.654
14	A show important words and ideas in a lesson in a bl s fl	14	0.712	0.096	0.616

Descending Array of Differences Between Factors 3 and 4

No.	Statement	No.	Type 3	Type 4	Difference
10	A talk to bl s about what work to do at home	10	-0.300	-0.735	0.435
25	A spend extra time teaching bl s spelling	25	0.682	0.270	0.412
16	A let s find their own ways to succeed in school	16	-1.317	-1.728	0.411
39	A give bl s easier work when they first start learning Eng	39	0.660	0.322	0.338
26	A let bl s talk about classroom tasks in their first lang	26	-1.509	-1.542	0.034
4	Bl s use English to talk about work in class	4	-0.034	0.029	-0.063
27	A tell bl s about jobs and university after school	27	-1.148	-0.996	-0.152
18	A let bl s sit with s who speak English well	18	0.381	0.555	-0.173
41	A think about how difficult it is for bl s to use English	41	-0.523	-0.255	-0.268
31	A check that bl s can understand instructions	31	0.585	0.865	-0.280
24	All s discuss different languages in the classroom	24	-1.579	-1.118	-0.460
45	A try to learn some words of their s' first language	45	-0.688	-0.227	-0.461
19	A give bl s more time to do work in class	19	0.630	1.188	-0.558
15	A believe that bl s can do well at school	15	0.141	0.729	-0.587
37	A talk to bl s' parents with a person who can translate	37	-0.104	0.485	-0.589
30	A are friendly to both bl and English-only s	30	0.070	0.677	-0.607
8	A help bl s to get to know their classmates	8	0.856	1.545	-0.689
36	A speak the same amount to bl s and English-only s	36	-1.190	-0.488	-0.702
46	A put bl s with a 'buddy' when they first start school	46	0.634	1.389	-0.754
22	A alllow bl s to ask classmates when they don't understand	22	-0.538	0.358	-0.895
1	A talk about the benefits of being bl	1	-0.815	0.124	-0.940
23	A spend extra time teaching bl s to write in English	23	0.622	1.606	-0.984
28	A give bl s chances to speak Eng with whole class listening	28	-1.286	-0.215	-1.072
17	A teach bl s new words by pointing to pictures or things	17	-0.399	0.856	-1.255
34	A tell bl s how they can use ICT to learn	34	-0.453	0.930	-1.382
3	A let bl s speak their first language outside lessons	3	-1.253	0.157	-1.410
21	A know what work bl s can do in their first language	21	-1.594	-0.131	-1.463
29	A put different languages on walls around the school	29	-0.860	0.610	-1.469
12	A listen to bl s read in English regularly	12	-0.493	1.255	-1.748
32	A let s who speak the same language sit together in class	32	-0.301	1.891	-2.192
13	A talk to a class about bullying s because they're bl	13	-1.120	1.597	-2.717

Factor Characteristics

	Factors 1	2	3	4
No. of Defining Variables	3	3	4	3
Average Rel. Coef.	0.800	0.800	0.800	0.800
Composite Reliability	0.923	0.923	0.941	0.923
S.E. of Factor Z-Scores	0.277	0.277	0.243	0.277

Standard Errors for Differences in Factor Z-Scores

(Diagonal Entries Are S.E. Within Factors)

Factors	1	2	3	4
1	0.392	0.392	0.368	0.392
2	0.392	0.392	0.368	0.392
3	0.368	0.368	0.343	0.368
4	0.392	0.392	0.368	0.392

Distinguishing Statements for Factor 1 (P < .05 ; Asterisk (*) Indicates Significance at P < .01)
Both the Factor Q-Sort Value (Q-SV) and the Z-Score (Z-SCR) are Shown.

		Factors							
			1		2		3		4
No.	Statement	No.	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR
31	A check that bl s can understand instructions	31	5	1.78	0	0.09	1	0.59	3	0.87
25	A spend extra time teaching bl s spelling	25	5	1.72*	-1	-0.17	2	0.68	1	0.27
33	Bl s get extra time in tests or exams	33	4	1.37	0	-0.16	5	2.11	-3	-1.13
41	A think about how difficult it is for bl s to use English	41	2	0.89*	-2	-0.85	-1	-0.52	-1	-0.26
6	Bl s leave normal lessons to go to English lessons for bl s	6	1	0.15	-3	-0.89	-2	-0.66	-4	-1.64
16	A let s find their own ways to succeed in school	16	-2	-0.49	1	0.32	-4	-1.32	-4	-1.73
18	A let bl s sit with s who speak English well	18	-3	-0.86*	5	1.74	0	0.38	1	0.55
34	A tell bl s how they can use ICT to learn	34	-4	-1.67*	-1	-0.25	-1	-0.45	3	0.93

Distinguishing Statements for Factor 2 (P < .05 ; Asterisk (*) Indicates Significance at P < .01)
Both the Factor Q-Sort Value (Q-SV) and the Z-Score (Z-SCR) are Shown.

		Factors							
			1		2		3		4
No.	Statement	No.	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR
18	A let bl s sit with s who speak English well	18	-3	-0.86	5	1.74*	0	0.38	1	0.55
44	A give bl s a 'word bank' with useful words	44	1	0.17	4	1.63	3	0.89	0	0.04
1	A talk about the benefits of being bl	1	0	0.03	3	1.17*	-2	-0.82	0	0.12
4	Bl s use English to talk about work in class	4	-1	-0.14	2	1.07*	0	-0.03	0	0.03
24	All s discuss different languages in the classroom	24	-4	-1.92	2	0.51*	-4	-1.58	-3	-1.12
16	A let s find their own ways to succeed in school	16	-2	-0.49	1	0.32	-4	-1.32	-4	-1.73
33	Bl s get extra time in tests or exams	33	4	1.37	0	-0.16	5	2.11	-3	-1.13
5	Bl s can speak their first language in front of the class	5	-5	-1.93	-1	-0.34*	-5	-1.61	-5	-2.38
19	A give bl s more time to do work in class	19	3	1.01	-2	-0.66*	1	0.63	3	1.19
7	A buy books or DVDs which say the same thing in two langs	7	2	0.86	-2	-0.68*	3	1.18	-5	-1.74
11	A explain things using pictures and diagrams, not just words	11	1	0.15	-3	-0.85	4	1.49	2	0.62
39	A give bl s easier work when they first start learning Eng	39	3	0.95	-3	-0.90*	2	0.66	1	0.32
40	A use hand actions or body actions to help bl s understand	40	0	-0.03	-3	-1.40	4	1.34	-2	-0.48
32	A let s who speak the same language sit together in class	32	-2	-0.45	-5	-1.67*	-1	-0.30	5	1.89

Distinguishing Statements for Factor 3 (P < .05 ; Asterisk (*) Indicates Significance at P < .01)
Both the Factor Q-Sort Value (Q-SV) and the Z-Score (Z-SCR) are Shown.

			Factors							
			1		2		3		4	
No.	Statement	No.	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR
33	Bl s get extra time in tests or exams	33	4	1.37	0	-0.16	5	2.11	-3	-1.13
11	A explain things using pictures and diagrams, not just words	11	1	0.15	-3	-0.85	4	1.49	2	0.62
40	A use hand actions or body actions to help bl s understand	40	0	-0.03	-3	-1.40	4	1.34*	-2	-0.48
20	A use computers to translate between different languages	20	-3	-1.44	-4	-1.46	3	1.20*	-1	-0.36
44	A give bl s a 'word bank' with useful words	44	1	0.17	4	1.63	3	0.89	0	0.04
38	A are able to speak different languages	38	0	0.04	0	0.10	2	0.86	-1	-0.26
43	Bl s can use their first language during tests or exams	43	-5	-2.27	-4	-1.64	1	0.57*	-3	-1.19
2	Bl s can study their first language in school	2	-4	-1.50	-4	-1.48	1	0.39*	-2	-0.70
22	A alllow bl s to ask classmates when they don't understand	22	3	0.96	4	1.32	-1	-0.54	1	0.36
1	A talk about the benefits of being bl	1	0	0.03	3	1.17	-2	-0.82	0	0.12
3	A let bl s speak their first language outside lessons	3	0	-0.04	1	0.21	-3	-1.25*	1	0.16
28	A give bl s chances to speak Eng with whole class listening	28	-1	-0.05	0	-0.15	-3	-1.29*	-1	-0.21
21	A know what work bl s can do in their first language	21	-1	-0.07	-1	-0.54	-5	-1.59*	0	-0.13

Distinguishing Statements for Factor 4 (P < .05 ; Asterisk (*) Indicates Significance at P < .01)
Both the Factor Q-Sort Value (Q-SV) and the Z-Score (Z-SCR) are Shown.

			Factors							
			1		2		3		4	
No.	Statement	No.	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR
32	A let s who speak the same language sit together in class	32	-2	-0.45	-5	-1.67	-1	-0.30	5	1.89*
12	A listen to bl s read in English regularly	12	2	0.33	1	0.19	-1	-0.49	3	1.26
34	A tell bl s how they can use ICT to learn	34	-4	-1.67	-1	-0.25	-1	-0.45	3	0.93*
17	A teach bl s new words by pointing to pictures or things	17	-1	-0.05	0	-0.07	-1	-0.40	2	0.86
20	A use computers to translate between different languages	20	-3	-1.44	-4	-1.46	3	1.20	-1	-0.36*
2	Bl s can study their first language in school	2	-4	-1.50	-4	-1.48	1	0.39	-2	-0.70
33	Bl s get extra time in tests or exams	33	4	1.37	0	-0.16	5	2.11	-3	-1.13
7	A buy books or DVDs which say the same thing in two langs	7	2	0.86	-2	-0.68	3	1.18	-5	-1.74*

Consensus Statements -- Those That Do Not Distinguish Between ANY Pair of Factors.

All Listed Statements are Non-Significant at P>.01, and Those Flagged With an * are also Non-Significant at P>.05.

			Factors							
			1		2		3		4	
No.	Statement	No.	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR	Q-SV	Z-SCR
8	A help bl s to get to know their classmates	8	2	0.57	3	1.28	3	0.86	4	1.55
10*	A talk to bl s about what work to do at home	10	-2	-0.49	-1	-0.58	0	-0.30	-2	-0.73
26	A let bl s talk about classroom tasks in their first lang	26	-3	-0.96	-5	-1.95	-4	-1.51	-4	-1.54
45*	A try to learn some words of their s' first language	45	-2	-0.55	-2	-0.80	-2	-0.69	-1	-0.23

Appendix J: The Correlation matrix