Supporting Language and Cognitive Development

In responding to the individual learning needs of bilingual pupils, it is important that linguistic development be integrated with other kinds of learning. Learners require English to communicate with peers and teachers and to continue the process of conceptual development within the context of an English medium school. Thomas and Collier (1997, 2000) have symbolised the relationship between the socio-cultural, linguistic and cognitive dimensions of language acquisition as a multi-dimensional prism with the learner at its centre, surrounded by the social and cultural processes of everyday life which have impact on the cognitive, academic and language domains of development . Within a supportive socio-cultural environment, the language, cognitive and academic dimensions must develop together in an interdependent way – 'If one is developed to the detriment of another, this may be detrimental to a students' overall growth and future success' (Thomas and Collier, 1997, p.21).

Scaffolding Language Learning

A key idea in helping learners to construct meaning derives from Vygotsky's work (1962). He described learning as a cooperative venture where negotiation of meaning is more important than transmission of knowledge. A central concept in his work is the Zone of Proximal Development (ZPD) - the distance or cognitive gap between what the learner can do without help and what the learner can do with the collaboration and support of a more skilled expert. Thus, teachers intervene with learners in a joint construction of knowledge by challenging and extending their current level of development, using their existing repertoire of skills and knowledge but providing a supportive scaffold so that the learner is able to move to the next stage within his or her ZPD. This scaffolding metaphor is a crucial one in relation to EAL pedagogy. Vygotsky suggests that the only 'good' learning is learning that is ahead of actual development. Gibbons (2002) argues that 'it is only *when* teacher support – or scaffolding – is needed that learning takes place, since the learner is then likely to be working within his or her zone of proximal development' (p.10). If this does not take place, therefore, the learner will be perpetually operating within his or her comfort zone and will not move from what is known to what is new learning. In this collaboration, the talk that accompanies joint problem-solving is important in providing a resource for thinking. Collaborative learning activities can also be designed to stimulate the kind of pupil-teacher, or pupil-pupil, dialogue that supports explorative talk and the acquisition of English language skills in a cognitively demanding yet linguistically and socially supportive situation. For an example of a collaborative learning activity designed to support the development of talk see this Macbeth vignette. Where learners are involved in an apprenticeship relationship with a more experienced peer or adult, undertaking joint involvements to solve problems and carry out tasks – the notion of the collaborative co-construction of knowledge – effective language learning will be enhanced.

The Knowledge Framework

If EAL learners are to catch up academically with their peers, cognitive growth and mastery of academic content must continue while English is being learnt. Thus the learning and teaching of EAL must be integrated with the learning and teaching of other academic content that is appropriate to learners' cognitive level. By the same token, subject teachers need to take on a role in teaching language. Mohan (1986) provided a theoretical framework for such an approach. In his model, content and language objectives need to be integrated across the curriculum in a systematic way. This approach is referred to as the 'Knowledge Framework', which is made up of six major structures of knowledge: classification, principles, evaluation, description, sequence and choice. Each of these knowledge structures links to the specific types of thinking skills involved in a particular activity, and has unique and distinct linguistic features setting it apart from the others. Mohan also argued that the knowledge structures could be represented graphically by 'key visuals' such as graphs, tables, flowcharts, etc. that have reduced linguistic demands but organise information in a format that assists understanding of concepts and helps to develop related language skills.

The role of the first language

First language development will have a significant impact on both second language learning and cognitive development. (see Bilingual Language Acquisition). Research into bilingualism tells us that a bilingual learner is able to draw on existing knowledge and awareness of the structure and functions of language, and that first language development supports the learning of the second or additional language. Bilingual learners are able to transfer knowledge and skills between languages, using the 'common underlying proficiency' whereby aspects of proficiency in first and second language are interdependent and actively used across languages. Cummins (2001) represents this as a 'dual iceberg' in which the surface features of each language, for example pronunciation, syntax etc., are very different but are being processed by a single system so that content and skills learned through one language will transfer to another. Continuing development of both languages seems to support enhanced cognitive, linguistic and academic growth. Indeed, longitudinal research into long-term fully bilingual educational programmes (Collier

2000) has shown that two-way bilingual education at primary school level is the most effective model of provision for the long-term academic achievement of EAL learners.(see research summary)

Jill Bourne (DfES 2002) stresses the value of pupils' bilingual skills in the Literacy Strategy's guidance on home languages in the literacy hour, which provides background information on bilingualism and some practical strategies for using pupils' first language proficiency to support the development of the additional language (see Home Languages in the Literacy Hour pp. 73-77). In a 2003 publication, "Aiming High: Raising the Achievement of Minority Ethnic Pupils", the DfES presented a case study of a primary school that 'has developed a programme of support for promoting the use of pupils' first language with the aim of raising achievement', describing the strategies the school has employed and the 'focused and targeted teaching which draws on pupils' bilingual skills. Pupils are encouraged to use their first language skills by 'partner talk' during whole class teaching, paired or small group independent work and effective use of adults who share first languages with the pupils' (p31). However, to be most effective, schools need to go further in ensuring that the model is not simply one of transitional bilingualism, where the first language is used only to the extent necessary for a child to achieve competence in the second language.

Language for Thinking and Learning

Cummins (1984) has distinguished between basic interpersonal communication skills (BICS), and cognitive academic language proficiency (CALP): the first is a helpful shorthand for the sort of language encountered in day-to-day activities, which is heavily dependent on contextual support in a face-to-face situation; the second describes the language associated with curriculum subjects that is needed to express higher order thinking skills and is related to learning and the development of cognition. (see see BICS/CALP for a fuller description). Cummins suggests a continuum along which language learners develop their knowledge and understanding in and through English within a framework identifying the cognitive and contextual demands of the curriculum. Language learners move along this continuum from a situation where the learner is supported by a range of interpersonal and situational cues to one where the learner has to rely mainly on linguistic cues with little contextual support. Along this continuum, the language demands of expressing higher order thinking skills also become increasingly onerous, but teachers need to develop strategies for moving students along the continuum.

In his very practical handbook that draws on the work of Vygotsky, Cummins, Mohan and others, Cooke (1998) describes the pitfalls in consistently offering EAL learners material that is cognitively unchallenging 'because they do not have enough English' and gives examples of planning collaborative learning activities that offer challenge but are well contextualised to scaffold learning and develop language. He identifies the thinking skills and language functions that are developed by the different types of activities, and the key visuals which could be used to organise the information involved. So, for example, a ranking order activity placing a number of countries in order of estimated area would involve pupils in evaluating, applying criteria, judging, measuring, estimating, etc., and might use a rating table or graph, or a continuum chart. These sorts of activities also encourage the use of first language as a tool for learning: 'Given that (EAL learners') experience has probably been mediated through their first language, it makes sense that activating and connecting prior experience to the new knowledge will often be more effective if the talking around the topic allows for first as well as second language use'.

Conclusion

Strategies, that scaffold active and purposeful use of language and present cognitive challenge within a familiar context, will be crucial for teachers to use in supporting EAL learners' language and cognitive development. The DfES (2003) recognises that 'bilingual pupils may also be helped to access those parts of the curriculum which are more dependent on language by the use of strategies such as use of key visuals, templates for writing and classroom organisation which allows for collaborative group work' (p29). It is important to remember that the task facing a learner who is new to English is a daunting one. Progressing from a different starting point from other children, the learner must acquire a new language whilst also learning the curriculum in the new language. At the same time they need to develop and engage with the socio-cultural understandings and values rooted in the new language, in the school and in society. In addition, the learner is faced with trying to catch up with a moving target since other pupils for whom English is their mother-tongue will be continuing to develop linguistically and cognitively. This is clearly a distinctive task, which will be most effectively achieved when 'the cognitive, linguistic and academic dimensions of academic learning are fused. The glue that binds them together in the process of learning is the extent to which broader socio-cultural processes create the conditions for full identity investment on the part of the learner' (Cummins 2001).

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