Children's Personal Epistemologies: (ChiPE)
capitalising on children's and families' knowledge in schools towards effective teaching and learning

Decades of research have shown that Western classroom processes are dominated by teacher talk, with limited opportunity for pupils to bring their own ideas and knowledge into the classroom discourse (Flanders 1970; Galton et al. 1980; Alexander, 2001; Howe & Mercer, 2010). Current pressure to perform well in international tables of achievement often renders teaching more didactic, more formulaic and with even less time for children's contributions. Thus knowledge becomes defined by formal curricular content, and classroom dialogue may be limited and exclusive. The EU FP6 INCLUD-ED project, however, has shown that certain dialogic pedagogical strategies can improve both inclusivity and academic achievement. **ChiPE** sought to find out whether INCLUD-ED's 'Successful Educational Actions' (SEAs) would work in England, and whether children's beliefs about knowledge would become more sophisticated as they recognised and discussed each other's 'funds of knowledge', ideas and opinions.

ChiPE's main objectives, therefore, were:

(i) to introduce two SEAs to promote inclusive pupil dialogue, and draw on children's out of school knowledge and ideas from families and communities,
(ii) to look for developments in children's and teachers' personal epistemologies (knowledge beliefs) over the course of these SEAs being implemented.

Two SEAs

Dialogic Literary Gatherings (DLG)
(Flecha, 2000)

- Children read agreed section of a classic books, e.g. 'The Odyssey'
- In advance, at home, they choose an idea to share in the DLG
- They take turns to explain their choice and discuss each others' ideas
- The teacher's role is to chair the discussion, ensure fair participation, and listen rather than talk

Interactive Groups (IG) (mathematics) (García-Carrión, Díez-Palomar, 2015)

- Children do maths problems in small mixed ability groups for 10-20 minutes, then move to new base
- An adult volunteer at each base ensures that children help and explain the maths to each other, but does not take the role of teacher
- Class teacher introduces, monitors and leads plenary

Flanders, N. (1970). *Analysing teacher behaviour*. Oxford, England: Addison–Wesley; Galton, M.J., Simon, B. & Croll, P. (1980). *Inside the Primary Classroom*. London: Routledge & Kegan Paul; Alexander, R.J. (2001) *Culture and Pedagogy: international comparisons in primary education*, Oxford: Blackwell; Howe, C. & Mercer, N. (2010) Children's social development, peer interaction and classroom learning. In R. Alexander et.al (ed) *The Cambridge Primary Review Research Surveys*. London: Routledge; Flecha, R. (2000): *Sharing Words. Theory and Practice of Dialogic Learning*. Lanham, M.D: Rowman & Littlefield, García-Carrión, R. & Díez-Palomar, J. (2015) Learning communities: Pathways for educational success and social transformation through interactive groups in mathematics, *European Educational Research Journal*, 14:151-166

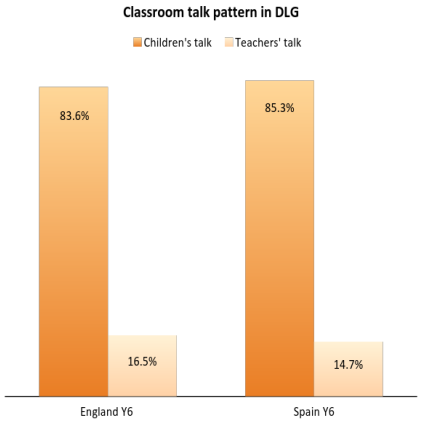
Data collection

Six English and two Spanish schools took part covering a range of achievement levels, locations, ethnic diversities and socio-economic circumstances. ca. 350 children, 14 teachers, 13 parents/volunteers took part.

Sessions were observed and videoed; children, teachers and volunteers or parents were interviewed at beginning and end of case study period (ca. 6 months); achievement information collected.

Qualitative data analysed with aid of qualitative and quantitative features of Nvivo

Findings



Classroom interaction

- Reversal of typical teacher-dominated talk
- In DLGs over 80% pupil talk with 75% children contributing
- Frequent long utterances (>20 words)
- Children question and listen to each other
- They explicitly agree or disagree with each other, giving reasons and using their funds of knowledge
- High levels of engagement sustained 50 – 60 minutes
- Conclusion: pupil dialogic learning environment

- Achievement improved compared with previous years
- Complex linguistic constructions in DLGs
- Children use 'funds of knowledge'
- DLG topics include moral, ethical issues, social justice, 'taboo' or difficult topics e.g. death, love
- Better social relationships
- Very positive parental support
- Teachers amazed at engagement, topics and enthusiasm

+2 levels	English				Maths			
	2011	2012	**2013**	**2014**	2011	2012	**2013**	**2014**
Overall	0%	35%	**33% R 17% W**	**57% R 32% W**	7%	26%	**17%**	**46%**

Example of results in one rural primary

'Some of the people would never be friends … started to talk to each other in DLG, to share ideas … the after school they just hang out and talk about it, and then they were a lot more social to each other' (10 year old boy)

Dissemination and Impact

Improved achievement levels especially in deprived areas should ultimately enhance socio-economic futures as these children grow up. This will contribute to achieve the EU2020 targets (i.e. reducing Early School Leaving)

- International and national conferences (e.g. BERA, ECER, EARLI, WERA)
- Schools extend DLG /IG in more classes
- Regional authority 'Race, equality and diversity' to introduce methods
- Parents an volunteers become active members of the school and take responsibility of the children education; one of them took an active role as a governor as direct result of taking part in IG

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