Babies who blow bubbles find learning language easy

Youngsters who can lick their lips, blow bubbles and pretend that a building block is a car are most likely to find learning language easy, according to a new study funded by the Economic and Social Research Council (ESRC). Psychologists at Lancaster University, led by Dr Katie Alcock, found strong links between these skills and children's language abilities.

Their study looked at more than 120 children aged 21 months - the time when they are learning new words at a faster rate than at any other stage of their life. It included questionnaires for parents and special tests of motor and cognitive abilities.

Dr Alcock said that an especially interesting finding was that children who were poor at moving their mouths were particularly weak at language skills, while those who were good at these movements had a range of language abilities. She believes that the findings could help child experts identify very early on those youngsters most likely to have problems with their understanding of words and speech in later life.

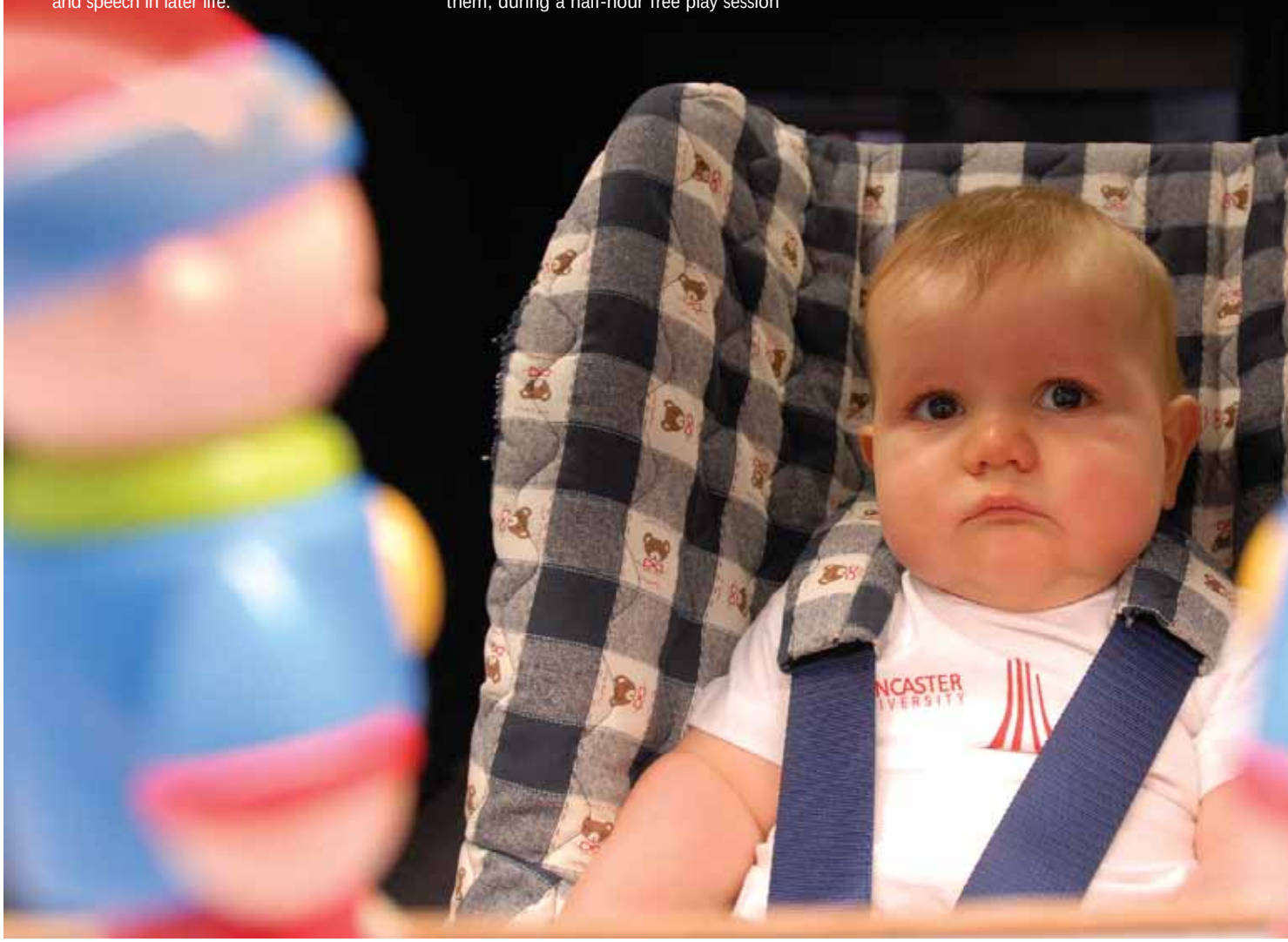
In experiments, the children were divided into four groups, and those in three of these were given more detailed testing in motor skills, understanding, or language and hearing.

The study found that in each group, some skills had closer relationships to language abilities than others. They also showed different patterns of relationships. For instance, there was no link when it came to easier movements, such as walking and running.

To assess spontaneous speech in a familiar place, researchers recorded everything said by children, and the person looking after them, during a half-hour free play session in each child's home. This was then analysed in terms of the range of words produced, and the length of sentences.

In a second group, children were assessed on a wide variety of thinking and reasoning skills: working out how to put puzzles together, matching pictures and colours, interacting with an adult to get their attention, and 'pretending' that one object is another, such as using a block for a car.

Children who were good at this were also better at language, but there was no relationship with more general thinking skills, such as doing puzzles.



Psychologists find links between mouth movement and children's language development.

In another group, children were tested on their ability for instance, to say a new or unfamiliar word.

Children who could say new words an adult asked them to repeat, were best at language. Being able to listen to a new word or a funny sound and work out which picture it went with also distinguished between children with advanced and not so strong abilities.

The researchers intend to follow-up this study when the children are older, to find out which skills give the best indication of later language abilities and problems.

Promoting hydro power

Researchers at Lancaster have embarked on research which could see more of the region's electricity generated by hydro power.

In North West England, thanks to reliable rainfall, many rivers and streams can potentially be used to generate electricity by harnessing the power of moving water and converting it into energy in a turbine.

Present day hydro developments can range from very small scale, possibly supplying one or two houses, to larger scale such as a multi-megawatt scheme.

The North West currently has 14 sites, generating 8.2 GWh of electricity from hydro power per year, according to regional statistics for 2004.

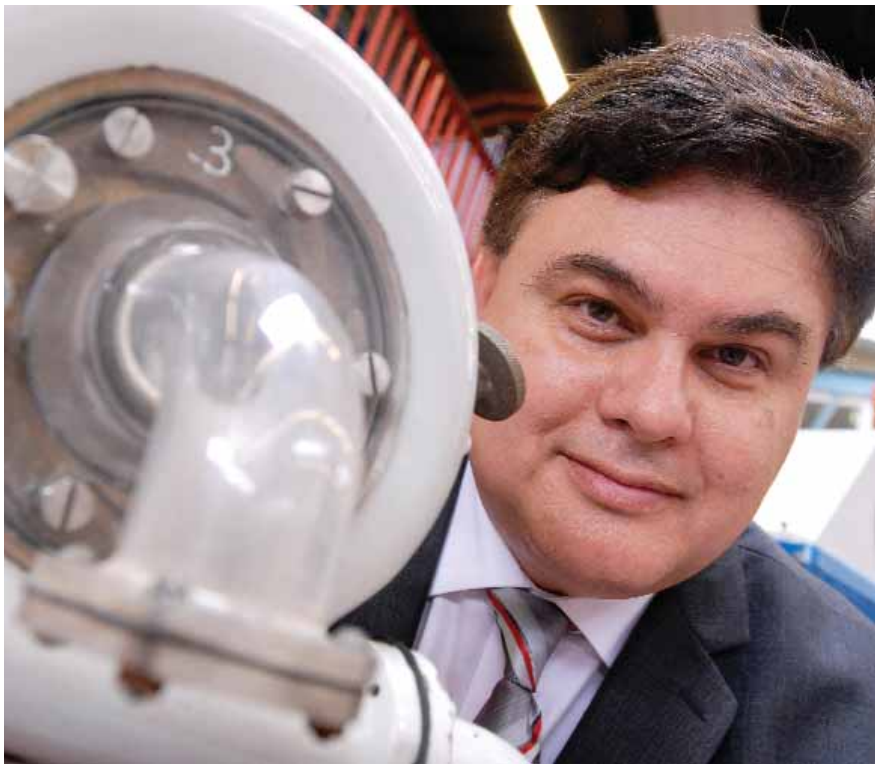
At a national level the Department of Trade and Industry states that if small-scale hydroelectric power from all of the streams and rivers in the UK could be tapped it would be possible to produce 10,000GWh per year - enough to meet over three per cent of our total electrical needs, making a significant contribution to the Government's renewables target of 10 per cent by 2010.

However practical problems, such as environmental sensitivity and economic considerations, have meant that hydro power has not been developed to its full potential in many areas.

Thanks to a £290,000 grant from the Joule Centre, a Northwest Development Agency backed organisation which supports academic and industrial research into sustainable energy, the University is now set to develop a system which will promote the use of hydro power in the North West by examining some of the obstacles standing in the way of hydro systems.

Researchers also aim to develop a tactical tool which will help identify potential sites for hydro power developments and provide a means of assessing them for suitability.

The two-and-a-half-year project brings together researchers from a range of disciplines including Engineering, Environmental Science, Geography, Economics and Sociology along with researchers in the University's Centre for the Study of Environmental Change. Scientists from the Natural Environmental Research Council's Centre for Hydrology and Ecology which is based in the Lancaster Environment Centre, are also taking part in the research.



Director of Lancaster University Renewable Energy Group, George Aggidis with model turbines.