

Plymouth BabyLab

Newsletter • Summer 2008



Research Update

Since the launch of our website and press campaign in the winter of 2006, many of you have been to visit us and lots of little ones have left with baby scientist certificates. In the short time we have been operating, we are pleased to report the following figures as an illustration of how we are getting along.

599 parents have signed up to the BabyLab

800 children have been registered

235 BabyLab visits (81 last year, 154 this year)

CDI questionnaire: what is it for?

Most of you who came to the BabyLab were asked to fill in the CDI questionnaire (Communicative Development Inventory), which is a list of 416 words that are presumably part of children's early vocabulary. What we do afterwards is count the number of words that you reported your child could produce when she/he came to the BabyLab, and compare it to the curves which have been computed by the BabyLab team in Oxford University. The reason for this is that we always need to show to our colleagues, when we publish our data, that our little participants were developing

language "normally". This term "normally" entails actually much more variation than you may imagine. For example, at 16 months, 50% of children produce a maximum of 3% of the entire CDI word list (which means they can say on average 12 words), 10% of them produce NO words at all, and another 10% produce 18% of the list (about 75 words). At 20 months, 50% produce up to 10% of the list (so the average is 40 words at that age), but 10% produce 1%, and

10% produce up to 40%! So, as you see, the variation is huge! Besides, your child's vocabulary score at these ages does not predict their later ability to speak or to perform academically. Some children walk earlier than others, some talk earlier, each goes at his/her own rhythm. You can check the developmental curves of the CDI for yourself at:

<http://psyweb.psy.ox.ac.uk/babylab/cdi.html>

We found that many parents would have preferred not to fill in the CDI during their visit at the BabyLab, as it is time-consuming (between 15 and 20 minutes). So now what we do is send it to you before your visit (by email or by the post) and ask you to return it



Bill, age 5 months
Accent Perception in Infancy

to us on the day of your visit. This way you all have the opportunity to enjoy the visit! However, please make sure that you fill in the questionnaire at a time close to your visit, because toddlers learn words extremely fast at that age, and therefore from one week to the next the CDI score might change!

Of these 154 visits, this includes...

58 visits by 5 and 7 month babies investigating early accent perception

17 visits by 16 month babies helping us with our study of word learning

19 visits by 20 month babies for our research on weak and strong syllables

20 visits by 12 & 18 month babies helping us with discrimination of speech sounds

Please visit www.plymouthbabylab.org to read a summary of our research findings. If you want more details, please contact us on 01752 238209 or email us at info@plymouthbabylab.org

Have you moved house? Had another baby? Update your details using the form on page 4

Future studies

This autumn we will be launching new projects with new topics and new age ranges.

New exciting projects are starting in October, for children ranging from 5 months to 8 or 9 years. For example, Kirsten Abbot-Smith will examine how children build up knowledge of sentences, with children aged from 5 years to 7 years; Michaela Gummerum will look at new aspects of moral development in children aged 6 to 9 years; Clare Walsh will study reasoning abilities in 2 to 4 years olds; Joe Butler will still investigate how infants perceive accents in 5 to 7 month olds, but now he will be presenting them with foreign accents, and will also possibly use a new method.

We will also start a brand new procedure: Measuring children's brain electric activity.

Over the summer, we have been doing some pilot work for one important project that we have: using Evoked Response Potentials to study language development in infants. What is that? If you look at the picture, you will see that the little boy wears a cap with electrodes while watching a computer screen (which displays



Arthur, age 7 years
ERP Study



Rosie, aged 12 months, with mother
Discrimination of Speech Sounds

colourful pictures). These electrodes are like tiny thermometers, which measure the amount of electricity that the brain generates. The brain's activity, like the muscles' activity, generates very low amounts of electricity, and by recording this activity, we can determine which part of the brain works during a certain task, and for how long.

This can sound a little scary, but this ERP technique is absolutely non-invasive and completely safe. It has been used for 40 years in very young babies, children and adults all around the world, and has allowed a great understanding of the way the brain works. For example, we know that, thanks to techniques like this, babies' brains are already organised like adult brains for language: the left hemisphere is more responsive to language than the right one (in right handed people).

What we have been working on in Plymouth over the past weeks, is training ourselves to use the ERPS with children (we have experience with adults already, so we

practiced with our own toddlers and babies). The most difficult bit is to put the cap on the baby's head without her taking it off immediately! Usually babies don't really like wearing hats. So one of us sits down in front of the child and keeps her amused with puppets and toys while the other sneakily manages to put the hat on. Of course, as for all studies run in the BabyLab, the procedure is harmless, fun, entertaining, and hopefully enjoyable for all of us!

So you may be contacted for similar studies in the future. Please feel free to refuse to take part, we completely understand that this sort of procedure appears different from the usual ones that we carry out, although again, the electrodes simply measure the brain's activity, they do not generate electricity themselves! It would be like covering your child's head with tiny stethoscopes.

Thank you to all of you who have already visited us at the BabyLab - your input is of great value to us and an equally big thank you to all of those who are still waiting to visit. Your patience is much appreciated and we will be contacting you as soon as an appropriate study comes up. We are expecting an influx of projects starting in October so, if you haven't already visited us, we may be contacting you in the Autumn.

All studies have received ethical clearance from the Faculty of Science Human Ethics Committee (University of Plymouth). All members of the BabyLab have had CRB checks over the past 3 years.

Why we contact you - and why we don't!

As you see, each study targets a very specific age range. For most of them, we need to see children when they are, for example 5 months old, plus or minus 3 weeks. So, when we start a study, we look on our database for children who will be within this range at the moment of testing, and therefore you may simply have been unlucky because your child was just a little too young or too old to participate.

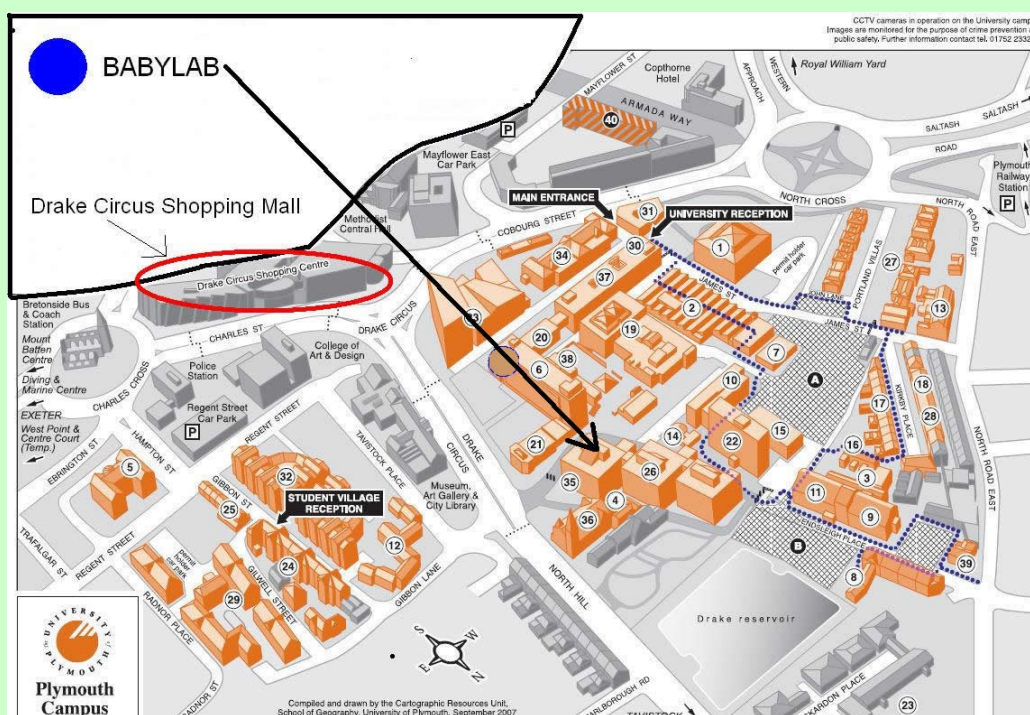
Another reason might be multilingualism. For most of the

studies, the tradition in the field is to see monolingual children, because this is the "simplest case". It is already extremely complicated to study how language develops in a monolingual child, and it adds to the complexity by including little bilinguals or trilinguals. However, as you can see in study 4 (see www.plymouthbabylab.org for summary), we do also include bilingual children, because sometimes of course this is precisely what we look at: how do bilingual children develop languages compared to monolinguals. Having said that, when the study we carry out is not about language, as in the case of studies 5 & 7 (see www.plymouthbabylab.org for

summary), then it doesn't matter whether the children are or are not bilingual, and then you may be contacted too!

Another very common reason is that your contact details have changed in between, or we have made a mistake when writing down your email address, for example. When this happens, we try every way we can to find you (email and telephone). If you think you might have been in that situation, please let us know (use the FREEPOST coupon on page 4, give us a ring, or email us). However, if for any reason you don't want to be contacted in the future, please let us know.

Directions to the BabyLab



The BabyLab is very easy to find, situated on the Drake Circus University campus just a short walk away from the Drake Circus shopping centre. If you are travelling within the local area, we will pay your travel expenses (up to £3).

As you approach the University from Drakes Circus, you will pass the new Roland Levinsky Building. Leave it on your left and walk up North Hill Road (the road with the Library and the Museum). On the left side of North Hill Road, the third building after the Roland Levinsky Building is called Portland Square, right behind the Sherwell Church. Enter this building through the front doors and ask the Security people to help you with your pram (from this entrance, you will have to go up a few stairs). Or, walk around the building and enter through the back doors. Take the lifts to the second floor, and then find your way to the BabyLab (room A215) by following the yellow signs.

New details to register? Got a friend to join?

Have you moved house, had another baby or changed your telephone number/email address?

If yes, then we would like to update your details. Please complete the form below and return to us at the FREEPOST address below (no stamp needed).

Friends You can also use the form to pass on to friends who are interested in signing up to the BabyLab. This helps us a great deal as the more children we see, the better the reliability of our research.

Email If we have sent you this newsletter by post, it probably means we do not have a functioning email address for you. If you have one, and can help us keep our costs down, please let us know by emailing: info@plymouthbabylab.org

Want to contact us?

Email info@plymouthbabylab.org

Telephone 01752 23 8209

Address FREEPOST
BabyLab
Room A215
Portland Square
Drake Circus
Plymouth, Devon
PL4 8AA

If you have any queries, concerns or you wish to withdraw from the BabyLab at any point, we are always happy to speak with you. If you ring us, and are asked to leave a message, please feel assured we will attempt to get back to you as soon as possible. There is also further information available through our website: www.plymouthbabylab.org

Please delete as appropriate:

- I would like to change or update my details
- I would like to sign up to the BabyLab (if you are new to us and wish to sign up to the BabyLab, we will contact you soon for further registration details).

Title.....

Forename.....

Surname.....

Address.....

Postcode.....

Tel:.....

Email.....

Child's name (if new to database)

Child's date of birth.....



We look forward to meeting you at the BabyLab for what we hope will be a fun experience for you and your child! Thank you for your support.

The BabyLab Team: Caroline Floccia, Deborah Prior, Kirsten Abbot-Smith