



Promoting Reward-Oriented Pathways to Enhance Language learning (PROPEL)

This study aims to understand how reward and motivation influence word learning in children.

The Neuroscience of Communication Development Lab (N-CoDe Lab) is a research lab in the Psychology and Language Sciences division at University College London. We are interested in why some children struggle to learn language and how we can help.

You can find out more about us and the research we do on our lab website: www.ncodelab.com

Why are you doing this research?

We are doing this research to investigate how reward and motivation may influence language learning. Additionally, we are also interested in examining what types of environments children find rewarding. This research could be beneficial in clinical and educational settings, especially to understand how to make learning more optimal for children who struggle to learn language.

Why have you invited my child to take part?

Your child has been invited to take part in this research because they are aged 8-11 and growing up in the UK. We are inviting neurotypical children, children with DLD (developmental language disorder), and autistic children to participate.

Does my child have to take part?

No. Your child does not have to take part in this study if you do not want them to. If you decide to take part, you may withdraw at any time without having to give a reason.

What will happen if my child takes part in the study?

We will ask for you for some information about your child (e.g., age, gender, and native language), and about their development (e.g., if they have hearing or neurological impairments, diagnoses etc). This information helps us to check whether your child is eligible for the study and helps us interpret the data we collect during the experimental tasks.

The study will involve in-person and online sessions. In-person sessions can be arranged as per your convenience (e.g., home, school, at the university) and will involve some games that assess your child's social, language, and cognitive skills (for example, solving puzzles, reading words out loud and playing interactively).

Online sessions will be conducted with a researcher present on Teams. This session will involve games that test your child's word learning, e.g. we may ask them to pair image with a word or guess if they have heard a word before. In the online game, we will ask your child to learn some new words. In all sessions, we will ensure that your child can take breaks and feels comfortable.

We will need to record your child's voice and record video of you and/ or your child during the parts of the sessions that require offline transcribing and scoring by our research team. Your child's voice recording will be securely stored on lab servers accessible only to authorized personnel. Your child's audio and video files will be labelled using the unique code associated with your data and will never be shared on any online database. We will delete this information after scoring.

Are there any risks to my child?

We do not anticipate any specific risks to your child from participating.

Will taking part help my child?

While there are no personal benefits to your child, they are making a valuable contribution to our work, and we hope this work will lead to methods to help people learn better. If you choose to travel to us, we will cover all your travel costs.

At the end of the study, we will offer you a voucher of £25 to thank you and your child for their participation. This would cover both the 1h to 1h and half an hour sessions, if this takes longer, we will increase the amount.

Your child will also have a chance to win a small prize (such as stickers or stationery) based on their performance, this will be given to them by the researcher.

Will anyone know my child has done this study?

Any identifying information collected about your child will be kept confidential. We use a random alphanumeric code instead of the child's name to identify your child. Personal data, such as links between codes and names, will be stored securely on password-protected computers and encrypted online storage facilities. Other identifying information, such as audio and video responses, will be destroyed as soon as it is no longer necessary for the research. Although we have established protocols and procedures to protect your child's data, there is always a very small chance that there may be a data breach at the university.

We want to publish the results of this study in a scientific journal, and this data may be used in applications for future funding. We may also present the results at scientific conferences and seminars and post summaries of our findings on our websites. We will ensure your child is not identifiable in any report or publication that uses this data.

How will you handle my child's data?

We plan to make anonymised data from this study available to other researchers using open data repositories so the results of this work can be checked and used in future studies. Personal identifiers, like your child's name or contact details, will be removed. We will not share voice or video recordings publicly. Anonymised research data may be transferred to and stored at a destination outside the UK.

If you wish for your child's data to be removed, please contact the lead researcher. This will be possible only up to a week from your child's participation, after which we will not be able to remove your child's anonymised data. As such, identifying features that are necessary for removal (e.g., your child's name) will be stored no longer than necessary.

What are my rights under the GDPR act?

Research is a task that we perform in the public interest. We are committed to abiding by the GDPR and Data Protection Act of 2018. For detailed information about what this means for research participants, please visit: <https://www.ucl.ac.uk/legal-services/privacy/ucl-general-privacy-notice-participants-and-researchers-health-and-care-research-studies>

If you wish to exercise your rights, please contact: data-protection@ucl.ac.uk

What if something goes wrong?

If something goes wrong, you are entitled to make a complaint. If you have any concerns, please email the N-CoDe Lab Director (Dr. Saloni

Krishnan, s.krishnan@ucl.ac.uk) who will do her best to answer your query. If this does not address your question, please email ethics@ucl.ac.uk

How will you handle any safeguarding concerns?

Members of the research team have completed enhanced DBS checks, safeguarding and first aid training. Everything your child discloses will be treated as confidential unless we are worried that there is a risk of harm (e.g. suspicion of physical abuse) to your child/ward or another young person, in which case we will inform our safeguarding team.

Has this study received ethical approval?

This study has received ethics approval from UCL's Research Ethics Committee, with the approval ID of [Ethics approval letter 6641.004.pdf]. If you have further concerns about our ethical processes, please email a member of the research team or you can email ethics@ucl.ac.uk OR if you wish to make a formal complaint, researchintegrity@ucl.ac.uk

Who is funding this research?

This research is led by Dr. Saloni Krishnan. The research is funded by UKRI (Medical Research Council) [Project Reference: MR/X003647/1].

What if I have further questions?

The research team is very happy to answer any questions you might have. Please email us at ncodelab@ucl.ac.uk

Will I find out about the results of the study?

We are happy for you to request copies of publications, but there is usually a delay of at least a year between study completion and publication. We will also post family-friendly summaries on our website. We are happy to send these to you directly, and please give us your email address if you would like us to share this with you.