

# Research Update

Issue 4, November 2019



## In this issue...

### Recent projects

Comparing different written and spoken cues in single-word naming. Wei Ping Sze.....	p.2
Brief communication partner training: does it help? Nivetha Koculan.....	p.3
The effect of background noise on speech. Nadia Tetrault.....	p.4
Awareness of language difficulties. Kate Austin.....	p.6
Does hearing your own voice benefit sentence repetition? Pradeep Phull.....	p.7
The impact of hearing self-voice on memory for words. Camelia Sadeghi.....	p.8
Language, number processing and calculation. Chloe Brooker & Ridwana Akhtar.....	p.10
“Values” in speech & language therapy: the perspective of people with aphasia. Kirsty Ayers...	p.11
Opera project.....	p.12

### New projects looking for volunteers

Therapy for sentence difficulties in aphasia.....	p.14
Naming therapy research for word-finding problems.....	p.15
Research about health numeracy skills in people with aphasia.....	p.15
Research on language and wellbeing in aphasia.....	p.16

Getting in touch.....	p.16
-----------------------	------

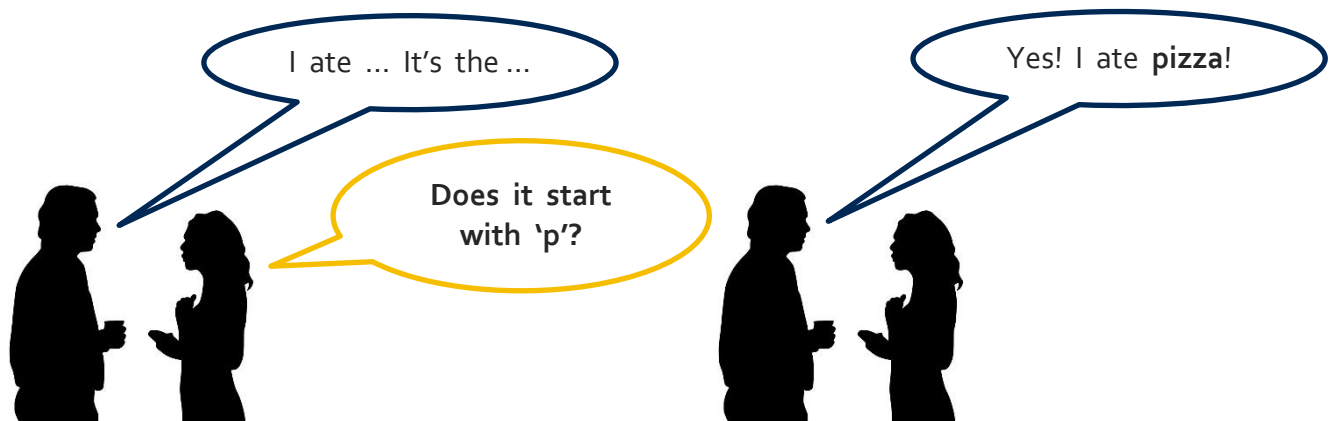
# Comparing different **written and spoken cues** in single-word naming



Wei Ping  
Sze

## Why is this important?

Cues are **very often used by clinicians** to treat word-finding difficulties.



Cues are **commonly used** spontaneously in daily conversation.

Yet, we **do not fully understand** how and why cues work.

## What people did

5 people with aphasia took part. They were asked to **name pictures** as fast as possible.

They were given a **written cue** or **written + spoken cues**, if they could not name them.

### If unable to name:

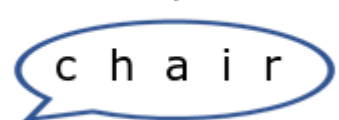


c h a i r      or

written cue only

c h a i r

+



written + spoken cues

## What we found

People **improved significantly** with '**written cues**' only, but **not** with '**written + spoken cues**'. This is unexpected.

**Effects from 'written cues'** can last at least **one week**.

# Brief communication partner training: does it help?



Nivetha Koculan

## Introduction

People with **aphasia** often use **total communication** to get their message across. This means using any method, not just speech.

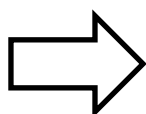
**Communication partners may need training** to help them support total communication. Training can be **specific to an individual** with aphasia or more **general** - about **what helps most people**.



We wanted to find out if **one session** of **specific communication partner training** helped communication between the partner and a person with aphasia.

## What participants did

One person with aphasia took part. He **watched** cartoon clips, then **described** them to the partner using **speech, gestures and drawing**



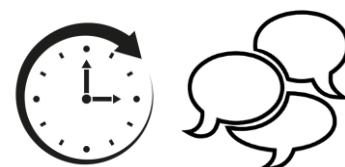
The partner then **learned about 3 specific things** that would help communication.

Two weeks later, they repeated the cartoon description task with different clips.

## What we found

There was **no difference** in the **amount** of information exchanged after training.

There was **no difference** in the **time** or **number of turns** it took to communicate the messages.



The communication partner **did** change **the way they supported** the person with aphasia after the training.

They used **better questions** and they **took more notice of** the person with aphasia's **gestures and drawings**.

This could make a difference to how people feel about their communication.

# The effect of background noise on speech



Nadia  
Tetrault

## Why is this important?

People without aphasia speak **louder**, **slower**, and with **higher pitch** in background noise. They also **pause more**.

Do **people with aphasia** do this?

- Researchers think **yes**
- However, people with aphasia **cannot change their speech as much** as people without aphasia

We wanted to explore this to learn more about aphasia.



## What people did

We used old data from two years ago where people with aphasia **spoke** in three kinds of **background noise** (**quiet**, **café**, and **single speaker**). We recorded the same people with aphasia again with a new kind of background noise (**two speaker** noise).



The people with aphasia described a **scene** while listening to the noise through **headphones**.



## What we found

Female people with aphasia spoke **louder, faster** and with **less pausing** than men

People with aphasia made **some changes** with **background noise**

- They spoke **louder** with single speaker background noise
- They spoke **slower** with café background noise

They **did not change** their **pitch** or their **pausing**

Speech in the **two speaker** background noise was **not different** from speech in **quiet**.

## How this helps

Showing where **speech planning** happens in the brain

- Pausing takes planning
- It can be affected by brain injury

**Raising awareness**

- Background noise can be difficult
- Everyone reacts differently

**Helping people with aphasia**

- Practising helps you get better
- **Practice speaking in background noise**
  - It will help you speak more easily
  - Other people might understand you easier



Nadia spoke about her work at the UCL Communication Clinic Conference on 19<sup>th</sup> September 2019.

She was awarded 'Best Presentation' by the audience, who were mainly people with communication difficulties that have taken part in research.

# Awareness of language difficulties



Kate  
Austin

## What was this study about?

Some people with aphasia do not have full awareness of their language difficulties.

Having awareness is important to make progress in therapy.

There are different kinds of awareness:

(1) **Knowledge** you have about your difficulties.



(2) **Judging** how you are doing during a task.

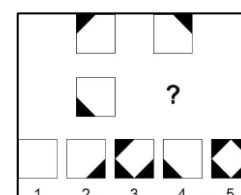
We used a naming task.



(3) **Correcting any errors** made during the task.



We wanted to find out if different types of awareness are related, and if **thinking skills** such as attention, planning, and problem solving are involved.



## What people did

18 people with aphasia took part. They completed tests of the different types of awareness and of thinking skills.

## What we found

- ✓ Knowledge of difficulties was **unrelated** to judgements during the naming task. This **supports previous research**.
- ✓ The **judgements** about how well people were doing during the naming task were **related** to how often they made **corrections**.
- ✓ Naming errors that involved the **wrong sounds** were **easier to judge** and were **corrected more** than errors of word meaning.
- ✗ All measures of thinking skills were **unrelated** to awareness. This **does not support** previous research.



# Does hearing your own voice benefit sentence repetition?



Pradeep  
Phull

## Why is this important?

Previous research has shown that hearing your own voice when **studying** can benefit:

- Word recognition
- Reading single words

The studies so far have tested college students and children with learning disabilities.

We wanted to find out whether hearing your own voice could improve **sentence repetition** in people with aphasia.

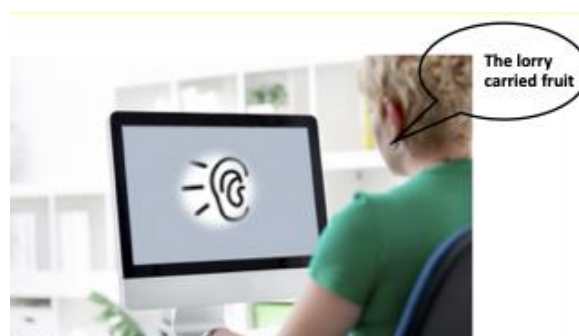
## What people did

13 people with aphasia and 14 people without aphasia took part in this study.

**Session 1:** Participants were **recorded** saying a list of 52 sentences



**Session 2:** participants **heard** a sentence and were asked to **repeat** it. The sentence was either a recording of their **own voice or another person's** voice.



## What we found

For most people with aphasia, there was **no difference** in sentence repetition when hearing their own voice compared to another person's voice.

In fact, some participants with aphasia found their own voice **distracting**.

People **without aphasia** paused less when hearing their own voice.

# The impact of hearing self-voice on memory for words in people with aphasia



Camelia  
Sadeghi

## Why is this important?

People with aphasia can have **difficulties** with speaking and understanding **language**.

Research shows we have **better memory** for things we **hear in our own voice** and when we **read aloud** than when we hear things in somebody else's voice or read in our head.

Hearing one's own voice may **help adults with aphasia remember words better**.

## What people did

15 people with aphasia **read a list of words aloud**- their voice was recorded onto a computer.

They then **studied** a list of 80 **words** under **4 conditions**.

Hear own voice



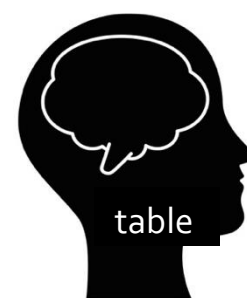
Hear somebody  
else's voice



Read aloud



Read in your head



They **remembered** as many words as possible for a **memory test**.



Press



- **Studied** (I remember studying this word)



Press

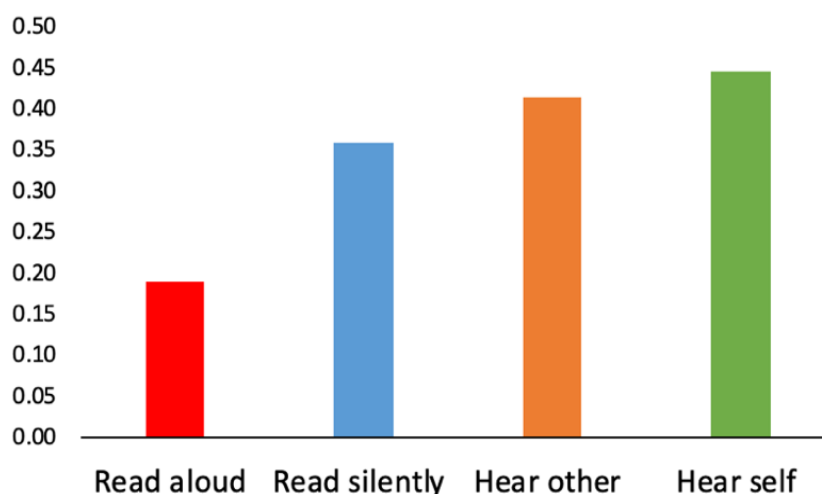


- **New** (I don't remember studying this word)



## What we found

**Small but not significant differences overall between hearing your own voice, hearing somebody else's voice and reading in your head.**



**A few people found hearing their own voice particularly helpful for memory.**

**Reading aloud was not helpful for memory.**

## Conclusion

**Hearing your own voice has similar memory benefits to other methods, but for some adults with aphasia it can be really helpful for memory.**

**Reading aloud is not helpful for memory.**

**More research is needed in a larger and wider sample.**

# Investigating the relationship between language skills, number processing and calculation



Chloe Brooker  
Ridwana  
Akhtar

## Why is it important?

Research shows that adults with aphasia have different strengths and weaknesses with numbers and calculation.

Some researchers have reported an advantage in **automatic** speech, e.g. counting from 1-10, reciting days of the week compared to **non-automatic** speech, e.g. counting backwards.

Problems with numbers may be related to specific language difficulties, e.g., **sound** related versus **meaning** related. In this project, we wanted to find out whether this was the case.

## What participants did



Six people with aphasia carried out tests of **language skills**, **numeracy**, and **functional numeracy skills**.

### Examples from the functional numeracy task

Chelsea	1
Crystal Palace	2

Who won the match between Chelsea and Crystal Palace?



You go to the cinema with 5 friends. How many tickets do you buy?



How long does it take to get from King's Cross Station to Big Ben?

## Main findings

There was no statistical difference between the **automatic tasks** and **non-automatic tasks**.

There was a relationship between meaning related tasks and non-automatic tasks. However sound related tasks did not significantly correlate with performance on automatic tasks.

## Conclusion

In this small group everyone had some difficulties, but there was a lot of variation between people. Our results suggest **there may be a link** between language skills and numeracy but more research is needed with a larger group of people.

# “Values” in speech and language therapy from the perspective of people with aphasia



Kirsty  
Ayers

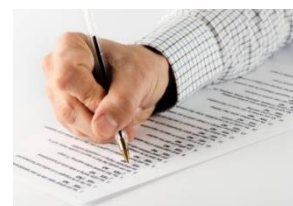
## Why is this important?

All **healthcare organisations** say **people should be treated** according to **values** like **respect, dignity, compassion** and **kindness**.

These words are hard to define and can mean **different things to different people**.

There is **very little research** looking at values in speech and language therapy.

Organisations sometimes use questionnaires to ask people about values in the care they have received. **Questionnaires are not always easy** for people with aphasia to answer.



## What people did?

Nine people with aphasia took part in this study. Information was collected in two **focus group** sessions and one **interview**.



People were asked to **talk about values in speech and language therapy** and answer these questions:

- What values do you think are **important** in speech therapy?
- Which of these values is the most important? **Why?**
- How does a speech therapist **demonstrate** these values?

## What we found

The people in the study outlined **eight** important values in their speech and language therapy:

**Patience, kindness, honesty, empathy, professionalism, respect, resourcefulness** and **knowledge**.

Some of the values suggested are the same as those already used by healthcare organisations, but **some are new**.

**The way services are delivered** (things like the number of sessions people have or being able to see the same therapist) **affects people's experiences of values**.



## Speak Red

People from the UCL Communication Clinic took part in a project to develop **an opera about aphasia**.

The project was led by writer and director **Finn Beames** and composer **Santa Bušs**.

The opera tells the **true story** of Ruby McDonough, an American woman who has aphasia.

Ruby was involved in a court case, as a **victim of crime**.

The court **did not allow any support** to help her get her message across.

They said she was **incompetent** and **could not** testify.

**Ruby changed the way the law works** in the USA.

She **appealed and won** the right for people with disabilities to have support when giving testimony as witnesses.



The word is in a rock  
I am hidden there with it

Many tongues have been taken from me in  
my life

But  
I can tell you about him



The opera was developed through **workshops**.

People with aphasia **worked together** to plan the words, music and staging.

For many, this was the first time they had been involved in opera.

**Creative activities allow people to express themselves in different ways.**

Like Ruby, the people taking part were able to **show their competence** despite their language difficulties.

The opera was **performed** at the Cockpit Theatre in May 2019. The plan is to develop it further. Watch this space!

These photographs are from the performance and were taken by Claire Shovelton.

New  
project  
looking for  
volunteers

## Therapy for sentence difficulties in aphasia

### Why is it important ?

Many people find **sentences** hard to understand or produce after a **stroke**.

We want to find out if a **new therapy** can **help** people with difficulties understanding and producing sentences.

We explore if **brain stimulation** boosts the effects of therapy.

### What will it involve ?

You will visit **Chandler House** at UCL **over several weeks** to meet a **researcher**.

You will participate in a new **4-week therapy** for aphasia.

You have to come to UCL **3 times per week** for **4 weeks** (12 therapy sessions).



The **therapy** involves **listening** to words and sentences, and **speaking**. This is combined with **brain stimulation**. We will put one **electrode** on your head and one on your right wrist, and a **very small electrical current** is given to your brain.

We will **measure** your **language** and other abilities **before** and **after therapy**.

You will also have a **brain scan** after therapy.

We pay **£10** towards your expenses for each session.

### Interested in finding out more?

Please **contact the researcher** (Claudia Bruns) for **more information**:



[utilise@ucl.ac.uk](mailto:utilise@ucl.ac.uk)



020 7679 4292

Scan



You can watch our **recruitment video** here:

<https://youtu.be/hwLZLQFmrsY>



New  
project  
looking for  
volunteers

## Naming therapy research for word-finding problems

Wei Ping  
Sze

Do you know **anyone** who had a **stroke**?

Do you know **anyone** who has **problems finding or saying** the right word?

Do you know **anyone** interested in receiving **full naming therapy**?

If you answered **"YES"** to the **above questions** we would like to **invite you OR** someone you know to **take part** in a **therapy research project**.



In this research, we run **full therapy sessions** to find out more about **naming**



We will research the **type of cues** that can help people find words.

To find out more, contact the researcher



[w.sze.17@ucl.ac.uk](mailto:w.sze.17@ucl.ac.uk)



07562 204 301

New  
project  
looking for  
volunteers

## Research about health numeracy skills in people with aphasia

Celia Serna  
Joyce Luo  
Zainab Nabi

### What is this about?

Health numeracy skills are important for taking care of your health. We want to find out how people with aphasia perform on **numeracy tests related to a health** context.

### What will happen?

You will come to the clinic for one hour

Give some simple information about yourself

Complete some numeracy tests and questionnaires

**Bonus** – have the chance to win a £50 voucher!

**Contact us** or the clinic to take part:



[celia.serna.17@ucl.ac.uk](mailto:celia.serna.17@ucl.ac.uk)

[joyce.luo.17@ucl.ac.uk](mailto:joyce.luo.17@ucl.ac.uk)

[zainab.nabi.17@ucl.ac.uk](mailto:zainab.nabi.17@ucl.ac.uk)

New  
project  
looking for  
volunteers

## Research on language and wellbeing in aphasia



Cat Choate  
Gergo  
Lakatos

### Why is it important?

Wellbeing means your mood, thoughts and feelings.

We want to learn whether taking part in an activity at a museum affects the **wellbeing and language** of people with aphasia.

### What will it involve?



You will attend **4 appointments**: 3 will be at Chandler House, the last one will be a visit to a UCL **museum**.



In each session you will **create a visual image**.  
Then, you will **talk** about your wellbeing with a researcher.  
There will be a short **questionnaire** and some **rating** scales.

**Interested in taking part?** Please contact Cat or Gergo directly:


catherine.choate.18@ucl.ac.uk      gergo.lakatos.18@ucl.ac.uk

Or use the clinic's contact details below.

## Getting in touch...

If you would like to take part in any of our research projects, please get in touch

### Our contact details are:

	<b>Phone:</b>	<b>020 7679 4239</b>
	<b>Email:</b>	<b>communicationclinic@ucl.ac.uk</b>
	<b>Post:</b>	<b>UCL Communication Clinic, Chandler House, 2 Wakefield Street, London, WC1N 1PF</b>