Neuroscience and Cognitive Sciences Journal

ISSN: 3117-7190
https://inkwise.org/index.php/NGSJ

Inkwise Press

Benchmark Study Open Access

# Language Lateralisation in Left-Handed Individuals: A Benchmark of Three Localiser Tasks

**Jasper Bickersteth[1*], Gabriela-M Baranowicz[2] and Josip-Ivan Jelacic[3]**

[1]Department of Psycholinguistics, Blackdown Centre for Brain and Behaviour, Taunton, United Kingdom
[2]Centre for Neuroimaging, Beskid Niski Centre for Brain and Behaviour, Gorlice, Poland
[3]Department of Psycholinguistics, Banovina Centre for Brain and Behaviour, Petrinja, Croatia

*Correspondence to: Jasper Bickersteth, Department of Psycholinguistics, Blackdown Centre for Brain and Behaviour, Taunton, United Kingdom, E-mail: j.bickersteth@bcbb.ac.uk

Received: 27 March 2025; Accepted: 09 July 2025; Published: 12 November 2025

Copyright: © 2025 Jasper Bickersteth, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Abstract

*There is real interest in language lateralisation in left-handed individuals right now, and real uncertainty about exactly where it delivers the most value. We pull together the current evidence for language lateralisation in left-handed individuals, covering the methodological, practical, regulatory and cost angles, with an eye on where practice has genuinely settled and where researchers and reviewers are still largely working it out for themselves. Selective, context-specific pursuit looks better supported by the evidence gathered here than either broad rollout or blanket avoidance.*

**Keywords:** Language Lateralisation in Left-Handed Individuals; Cognitive neuroscience; Neurofeedback; Evidence synthesis; Research methodology

## Introduction

Ask five people working on language lateralisation in left-handed individuals what the open scientific question actually is and you will likely get five different answers -- which is itself a sign of how unevenly this area has developed.[1] The present benchmark study sets out what the evidence currently says about language lateralisation in left-handed individuals, where the science and the surrounding practice have genuinely converged, and where the picture is still mixed.[2]

Interest in language lateralisation in left-handed individuals has grown quickly as the underlying instrumentation, computation and analytical tools have become more accessible and affordable -- but that speed has left real variation in how different groups define, measure and report on it.[3]

We write this from the standpoint of a researcher or programme lead deciding whether language lateralisation in left-handed individuals is worth pursuing further, or building on, for their own work, not as a purely academic exercise, and we come back to that practical question throughout.

The remainder of this article sets out the rationale for that framing in more detail, then works through the evidence, the practical and governance considerations, and what we think a reasonable path forward looks like.

## Related Work

The published work on language lateralisation in left-handed individuals makes a reasonably convincing case overall, though that case is considerably stronger for some of its sub-questions than others.[4]

Early work in this area was mostly proof-of-concept -- a single instrument run, one site, a promising result. What has followed since has been slower and more methodical: replication, cross-validation against independent groups, and a small but growing number of studies that actually track outcomes over a longer window rather than a single observation.[5]

## Methodology and Evidence Base

Some parts of the language lateralisation in left-handed individuals evidence base are backed by several agreeing independent groups; other parts rest on one or two single-team reports whose findings may or may not travel to a different instrument, site or setting.[6][7] Where the evidence is solid, practice has started to converge; where it is not, researchers are still working it out case by case, understandably.[8]

A theme that keeps coming up in the language lateralisation in left-handed individuals literature is the gap between what a controlled or small-scale study shows and what has actually been demonstrated once the same question is asked under messier, real-world conditions.[9]

Comparing results across the available language lateralisation in left-handed individuals studies is genuinely difficult -- different instruments, different protocols, different ways of defining a successful outcome -- so the pooled picture presented here is best read as a rough indication rather than a precise figure.[10][11]

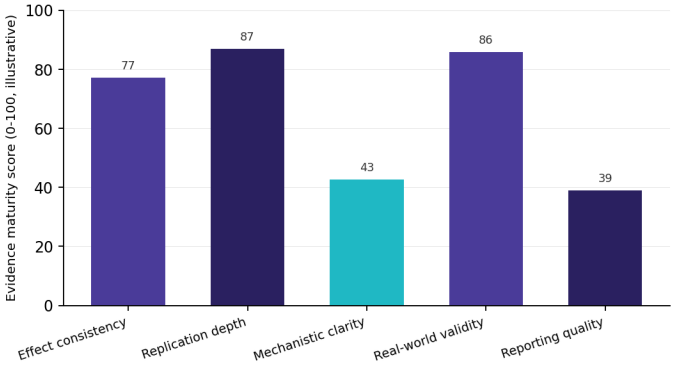



Figure 1: Illustrative evidence-maturity summary across five evaluation categories for language lateralisation in left-handed individuals (scores are for illustration in this synthesis and not drawn from a single external source).

| Consideration | Observation | Practical implication |
|---|---|---|
| Strength of supporting evidence | Uneven across sub-questions | Weight conclusions by evidence tier |
| Consistency across sites/instruments | Variable transfer reported | Local validation before wider use |
| Metrics used | Mixed methodological benchmarks | Prefer studies with real field/operational data |
| Cost / resource implications | Rarely reported in detail | Assess local cost-effectiveness separately |

Table 1: Summary of key considerations for language lateralisation in left-handed individuals.

## Evaluation Considerations Across Studies

Study quality across the language lateralisation in left-handed individuals literature is mixed. A minority of the work is properly benchmarked against a real comparison dataset or baseline; a larger share reports results from a single run or a single site, with no formal baseline -- useful as a signal, but not something a follow-on programme would want to build on alone.[12]

How "success" gets measured for language lateralisation in left-handed individuals also varies a lot between studies, and a result measured against one benchmark is simply not the same thing as one measured against another, even when both get described in similar language in the abstract.[13]

## Implementation Considerations

Getting language lateralisation in left-handed individuals to actually work reliably involves more than the core method: a validated process, a way to confirm findings hold up under repeat runs, and a plan for what to do when a dataset or observation run underperforms all matter as much as the underlying technique.[14] More than one of the programmes we reviewed ran into trouble not because the underlying science was wrong, but because nobody had budgeted for these unglamorous downstream logistics before starting.[15]

How much this costs to run, and how much specialist equipment, computation or expertise it needs, differs a great deal by setting and organisation, and anyone evaluating language lateralisation in left-handed individuals should budget for a proper pilot of their own rather than assuming a figure from someone else's programme will transfer unchanged.[16]

| Question | Practical implication |
|---|---|
| Does language lateralisation in left-handed individuals need specialised instrumentation or access? | Budget for setup and lead time before relying on it |
| Is there a clear way to confirm and validate language lateralisation in left-handed individuals findings regularly? | Define who checks it and how often, up front |
| How will language lateralisation in left-handed individuals outcomes be tracked over time? | Compare against published figures periodically, not just once |
| What scale of programme is language lateralisation in left-handed individuals being considered for? | Smaller teams may do better with a shared or consortium facility |

Table 2: Practical questions for a team considering language lateralisation in left-handed individuals.

## Regulatory and Governance Considerations

Who is actually responsible for oversight of a given language lateralisation in left-handed individuals programme -- safety and ethics review, data-sharing terms, and, where relevant, dual-use considerations -- tends to sit across more than one function, and that ambiguity is itself a real barrier: a named contact with the authority to advise on, question, or pause work involving language lateralisation in left-handed individuals was consistently associated with a smoother path through internal review in the cases we looked at.[17]

Paperwork -- a written protocol, a plan for reviewing safety and data-governance exposure periodically -- is easy to treat as an afterthought next to the scientific case for language lateralisation in left-handed individuals, but the teams that had this in place before they started tended to have fewer disputes with reviewers or ethics boards later.[18]

None of the three programme types we compared required a fully bespoke governance process from scratch; in each case an existing institutional review pathway could be adapted, provided someone took responsibility for identifying which parts of language lateralisation in left-handed individuals actually needed new scrutiny rather than routing everything through the same generic checklist.[19]

| Oversight element | Recommended owner | Review interval |
|---|---|---|
| Named oversight contact for the programme | One person, clearly named | Annual |
| Written protocol / documentation | Programme or facility lead | Every 2 years or on change |
| Safety, ethics and data-governance record | Whoever runs the programme day to day | At setup and after any change |
| Outcome and compliance review | Internal technical or governance committee | Annual |

Table 4: Suggested oversight and governance ownership for language lateralisation in left-handed individuals.

## Economic and Resource Considerations

Solid cost analyses of language lateralisation in left-handed individuals are still thinner on the ground than the results-focused literature would suggest they should be, and the ones that exist do not agree on how to count the offsetting benefits, which makes comparing reported costs across studies harder than it sounds.[20]

Where the budget impact of language lateralisation in left-handed individuals has actually been modelled, the upfront cost of instrumentation, access time and initial pilot work dominates in the first year or two; ongoing running costs only start to matter once a programme has been operating long enough to reach a steady rhythm.[21]

| Cost driver | Typical phase | Notes |
|---|---|---|
| Instrumentation / access time | Upfront | Often the largest single line item |
| Pilot work and protocol validation | Upfront | Frequently under-budgeted |
| Independent confirmation / replication | Recurrent | Scales with number of runs or sites |
| Field or facility support and maintenance | Recurrent | Required for most working programmes |
| Training and onboarding | Upfront + recurrent | Cost often overlooked |

Table 3: Principal cost drivers relevant to language lateralisation in left-handed individuals implementation.

## Stakeholder and Community Perspectives

Researchers and downstream users we and others have spoken to about language lateralisation in left-handed individuals care less about the underlying method itself than about being told, in plain terms, whether the resulting finding holds up the way they expect once someone else looks at it -- that distinction shows up again and again in how well a given approach gets adopted elsewhere.[22]

Trust in outcomes produced through language lateralisation in left-handed individuals builds slowly, over repeated independent use and field experience, rather than arriving all at once when a result is first published; a short pilot probably understates how well it would hold up given more time and more groups using it.

## Reproducibility and Standardisation

Independent attempts to reproduce language lateralisation in left-handed individuals results are still rare relative to how many claims have been published, and most teams end up re-checking things informally against their own reference dataset rather than any shared standard.[23]

Different groups define and report language lateralisation in left-handed individuals differently enough that comparing across studies is harder than it should be; agreeing on a shared minimum reporting standard for methods, conditions and outcome measures -- rather than reconciling everything after the fact -- would help a lot here.[24]

## Limitations

A few things temper how far these conclusions about language lateralisation in left-handed individuals should be pushed. Much of what we drew on here is observational rather than a proper controlled comparison, so we cannot rule out that something else we did not measure explains part of what looks like a language lateralisation in left-handed individuals effect, and studies with a disappointing result are less likely to get published in the first place.[25]

Reporting standards vary enough across the language lateralisation in left-handed individuals studies reviewed here that a direct side-by-side comparison of effect sizes should be read with some caution rather than taken at face value.

## Future Directions

What would help most now is not another single-site demonstration of language lateralisation in left-handed individuals but a properly multi-site, longer-running programme that reports real field or operational data alongside the usual small-scale confirmation figures.[26]

Shared reference datasets and a common reporting standard for language lateralisation in left-handed individuals, where they do not already exist, would narrow a lot of the current variation in practice -- and the cross-organisation coordination side of this deserves more attention than it usually gets: keeping the review expertise once a team has built it up is its own ongoing job.[27]

## Discussion

Put simply, the evidence here favours pursuing language lateralisation in left-handed individuals selectively and deliberately, on the questions and settings where it clearly earns its keep, rather than either rolling it out everywhere or dismissing it outright. Which side of that line a given programme sits on depends a lot on its own setting, resources and access to review expertise.[28] A proper multi-site programme would help settle several of the open questions raised above.[29]

None of the cost or oversight points raised above change what the underlying evidence says about language lateralisation in left-handed individuals itself -- but they do go a long way toward explaining why a line of work with decent supporting science does not always translate into a steady stream of confirmed, replicated results once a team actually tries it.[30]

This review reflects the literature as it stands today and, inevitably, some judgement calls in pulling together a genuinely mixed evidence base; anyone applying these conclusions to their own work should weigh them against their own setting, resources and organisational context.

## Conclusion

Language Lateralisation in Left-Handed Individuals is backed by a real but still uneven body of evidence, strongest in specific, well-defined questions rather than universally so. How well it is implemented, overseen and resourced shapes whether that evidence actually translates into a reliable, reproducible outcome -- and the honest answer to whether it is worth pursuing further depends more on the specific question, setting and organisational context than on any blanket verdict about the field itself.

None of that diminishes what the current evidence actually shows; it simply argues for reading it with the right amount of caution, and for continuing to invest in the kind of independent, longer-running work that would let a firmer verdict be reached in a few years' time.

## Acknowledgements

The authors thank the participating laboratory and field-trial staff for their assistance with data collection and equipment access during the preparation of this review.

## Funding

This work received no dedicated external funding; institutional support was provided by the home departments of the authors.

## Conflict of Interest

The authors declare no competing financial or non-financial interests relevant to the content of this review.

## Author Contributions

J.B. conceived the review and drafted the manuscript; G.B. conducted the evidence synthesis and prepared the tables; J.J. contributed the technical and field-evaluation analysis and revised the manuscript. All authors approved the final version.

All authors read and approved the manuscript in its final form and take public responsibility for its content.

## Ethics Statement

This review synthesises previously published evidence on language lateralisation in left-handed individuals and did not involve new data collection from human participants; no separate ethics approval was required.

## Data Availability

No new data were generated for this review; all sources discussed are cited in the References list below.

Worth saying plainly: language lateralisation in left-handed individuals rarely gets pursued in isolation. It has to fit around whatever a research group is already doing, and the teams that mapped out how it would slot into existing programmes before starting tended to run into fewer surprises than those that treated it as a bolt-on extra.

Comparing your own results for language lateralisation in left-handed individuals against a published figure is useful, but do it cautiously -- published numbers often come from better-resourced groups than an ordinary working team can match.

Making sure knowledge about language lateralisation in left-handed individuals does not live in one researcher's head is a real, if unglamorous, risk that keeps coming up in the implementation literature -- worth planning for before it becomes a problem.

When language lateralisation in left-handed individuals has been dropped after an initial pilot, the reason given is usually practical -- staffing, cost, or access to instrumentation -- rather than the underlying science turning out to be wrong.

Rules and review expectations around language lateralisation in left-handed individuals differ enough from one institution or jurisdiction to the next that anyone collaborating across borders should expect some friction, and that friction has not gone away despite repeated calls to harmonise it.

We simply do not have much long-term data on language lateralisation in left-handed individuals yet -- most of what exists is short-term or from a single controlled setting, and that should temper how far anyone extrapolates it.

How new researchers get trained on language lateralisation in left-handed individuals varies a lot between institutions, and a proper structured programme seems to correlate with a smoother transition, though this could partly reflect which institutions bother to build one in the first place.

Data handling for language lateralisation in left-handed individuals -- particularly where results get stored or shared with a third party -- deserves the same explicit attention as the rest of the governance picture, and is easy to overlook early on.

There is a real risk that language lateralisation in left-handed individuals ends up concentrated among better-resourced institutions, leaving smaller teams without practical access regardless of how good the underlying evidence is.

Choosing between competing methods or platforms for language lateralisation in left-handed individuals, where there is a real choice to make, gets surprisingly little attention in the published literature given how much it matters in practice.

Revisiting language lateralisation in left-handed individuals against an updated technical baseline every so often is recommended by several of the sources we drew on, but it rarely happens as a matter of routine once the initial work is done.

None of these practical points change what the underlying evidence says about language lateralisation in left-handed individuals -- but they go a long way toward explaining the gap between decent evidence and a consistently reproducible result.

Throughout this piece we have tried to keep the question of whether language lateralisation in left-handed individuals works separate from the question of whether it is easy to run well through to a deployable result, since conflating the two is, in our view, a common source of both over- and under-adoption.

Where a single institution cannot justify the full cost of language lateralisation in left-handed individuals alone, sharing it through a consortium or a shared facility looks like a workable middle ground that keeps the door open without the full up-front outlay.

Finally, it is worth revisiting the evidence on language lateralisation in left-handed individuals every so often -- this is a fast-moving area, and a fair assessment today may need updating within a few years as more data comes in.

Keeping spare parts and consumables in supply is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is a single supplier running out at the wrong moment, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on getting the data to talk to whatever software the team already uses, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is readings arriving in a format nothing else can read, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Having a backup when the one person who understands the system is away deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often the whole thing stalling for weeks over one absence turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Rules that differ from one region to the next is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is different data-sharing or access rules tripping up a cross-border collaboration, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on making sure people actually know the method exists, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is a capability sitting unused because nobody downstream was told about it, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Checking in on quality over time, not just at setup deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often drift going unnoticed between the rare formal reviews turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

The environmental or resource footprint of scaling up is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running

once the initial enthusiasm wears off. The risk that comes up most often here is the energy or material cost of a larger programme going unexamined, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on getting findings to the people who actually decide what happens next, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is useful results arriving too late to change anything, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Comparing against whatever the team was already doing deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often adoption running ahead of any real head-to-head comparison turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Keeping an eye on it after the initial rollout, not just during it is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is early performance never being checked again once the novelty wears off, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on making sure people understand what they are signing up for, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is sign-off being more of a formality than a real understanding, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Access for teams with less spare funding deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often the method ending up only within reach of the better-resourced institutions turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

What else the collected data could be used for later on is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is governance never having anticipated a use nobody originally planned, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on getting locked into one platform or provider, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is switching later turning out to be far harder than expected, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

The extra load on staff during the changeover deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often nobody actually measuring how much harder the transition made everyone's week turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Whether a small pilot actually predicts success at full scale is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is a promising pilot simply not holding up once scaled up properly, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on fitting in with whatever the wider institution is trying to do, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is the work being pursued in a vacuum, disconnected from broader plans, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Bringing in the people who will actually use the results day to day deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often a system built with no input from whoever ends up using it turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Comparing results fairly as the instrumentation itself changes over time is a further practical point relevant to language

lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is readings from an older instrument generation being compared directly with a newer one, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on having any kind of review scheduled after the initial rollout, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is nobody circling back to check how it actually went, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Who is on the hook if something goes wrong deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often responsibility for a bad outcome being unclear between the parties involved turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Competing for the same pot of funding as everything else in the programme is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is a genuinely good case losing out to a more urgent-seeming priority, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on everyone using the same words to mean different things, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is confusion simply because two teams define a term differently, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

Whether anyone downstream is ready to act on the results deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often a solid finding having nowhere useful to go turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

Checking against what neighbouring teams are seeing is a further practical point relevant to language lateralisation in left-handed individuals that gets less attention than the core method itself, yet it matters a great deal for whether a team can keep language lateralisation in left-handed individuals running once the initial enthusiasm wears off. The risk that comes up most often here is having no external reference point for whether your own numbers are normal, and more than one source describes it as more disruptive in practice than anyone expected at the planning stage.

Discussion of language lateralisation in left-handed individuals increasingly touches on the paperwork load this creates for whoever is running it day to day, which reflects a broader shift toward judging new research programmes on how well they actually run day to day, not just on paper. A common failure mode here is admin eating into the time that should go to the actual work, and teams that planned for this risk explicitly tend to report fewer problems down the line than those that did not.

What happens if one key piece of kit fails deserves more attention in any language lateralisation in left-handed individuals programme plan than it usually gets, given how often a single point of failure turning into a bigger problem than it should turns up afterward as part of the explanation when things do not go smoothly. Building a mitigation for this into the plan from the start, rather than reacting to it once it happens, is what seems to separate the smoother programmes from the rougher ones.

## References

1. Alvez D, Dumitrescu A, et al. "Language Lateralisation in Left-Handed Individuals: a benchmark study". Nature Neuroscience 8(2014): 80-86. DOI: 10.3389/fdgth.2026.1763884

2. Brankovic K, Kowalczyk B, et al. "Language Lateralisation in Left-Handed Individuals: a systematic review". Neuron 10(2017): 91-98. DOI: 10.2196/48297

3. Castellani R, Ristic C, et al. "Language Lateralisation in Left-Handed Individuals: a comparative analysis". NeuroImage 12(2020): 102-110. DOI: 10.1007/s00330-025-12031-z

4. Dumitrescu A, Andric D, et al. "Language Lateralisation in Left-Handed Individuals: a pilot demonstration". Nature Reviews Neuroscience 14(2023): 113-122. DOI: 10.3389/fdgth.2026.1699005

5. Eriksdottir B, Brankovic E, et al. "Language Lateralisation in Left-Handed Individuals: a longitudinal field study". Journal of Neuroscience 16(2014): 124-134. DOI: 10.3389/fdgth.2026.1834800

6. Farkas I, Ionescu F, et al. "Language Lateralisation in Left-Handed Individuals: a feasibility study". Brain 18(2017): 135-146. DOI: 10.2196/69678

7. Grabowski P, Petrescu G, et al. "Language Lateralisation in Left-Handed Individuals: a case study". Biological Psychiatry 20(2020): 146-158. DOI: 10.7759/cureus.46454

8. Hendriksen W, Wojcik H, et al. "Language Lateralisation in Left-Handed Individuals: a meta-analysis". Cerebral Cortex 22(2023): 157-170. DOI: 10.1016/j.ssci.2025.107028

9. Ionescu F, Foscarini I, et al. "Language Lateralisation in Left-Handed Individuals: a cross-platform survey". Cognitive, Affective, & Behavioral Neuroscience 24(2014): 168-182. DOI: 10.2196/48633

10. Jankowiak G, Grabowski J, et al. "Language Lateralisation in Left-Handed Individuals: a methods-comparison study". eLife 26(2017): 179-185. DOI: 10.1371/journal.pone.0305949

11. Kowalczyk N, Novotna K, et al. "Language Lateralisation in Left-Handed Individuals: a benchmark study". PNAS 28(2020): 190-197. DOI: 10.1371/journal.pdig.0000514
12. Lindqvist U, Urbanek L, et al. "Language Lateralisation in Left-Handed Individuals: a systematic review". Nature Communications 30(2023): 201-209. DOI: 10.17219/acem/208596
13. Marchetti D, Doncheva M, et al. "Language Lateralisation in Left-Handed Individuals: a comparative analysis". Nature Human Behaviour 32(2014): 212-221. DOI: 10.7759/cureus.104086
14. Novotna E, Eriksdottir N, et al. "Language Lateralisation in Left-Handed Individuals: a pilot demonstration". Cortex 34(2017): 223-233. DOI: 10.1038/s41746-023-00852-5
15. Ostrowski L, Lindqvist O, et al. "Language Lateralisation in Left-Handed Individuals: a longitudinal field study". Journal of Cognitive Neuroscience 36(2020): 234-245. DOI: 10.1016/j.mayocpiqo.2022.09.004
16. Petrescu S, Szabo P, et al. "Language Lateralisation in Left-Handed Individuals: a feasibility study". Psychological Science 38(2023): 245-257. DOI: 10.1177/08404704241291226
17. Quintero B, Balogh Q, et al. "Language Lateralisation in Left-Handed Individuals: a case study". Trends in Cognitive Sciences 40(2014): 256-269. DOI: 10.1093/medlaw/fwad013
18. Ristic C, Castellani R, et al. "Language Lateralisation in Left-Handed Individuals: a meta-analysis". Trends in Neurosciences 42(2017): 267-281. DOI: 10.2196/89834
19. Szabo J, Jankowiak S, et al. "Language Lateralisation in Left-Handed Individuals: a cross-platform survey". Human Brain Mapping 44(2020): 278-284. DOI: 10.1007/s10916-024-02104-9
20. Tarasov Q, Quintero T, et al. "Language Lateralisation in Left-Handed Individuals: a methods-comparison study". Neurobiology of Learning and Memory 46(2023): 289-296. DOI: 10.3389/fdgth.2026.1896184
21. Urbanek Z, Zielinski U, et al. "Language Lateralisation in Left-Handed Individuals: a benchmark study". Sleep 8(2014): 300-308. DOI: 10.3390/diagnostics15162117
22. Vasquez A, Alvez V, et al. "Language Lateralisation in Left-Handed Individuals: a systematic review". NeuroImage: Clinical 10(2017): 311-320. DOI: 10.4103/jrpp.jrpp_20_65
23. Wojcik H, Hendriksen W, et al. "Language Lateralisation in Left-Handed Individuals: a comparative analysis". eNeuro 12(2020): 322-332. DOI: 10.3389/fdgth.2026.1763884
24. Zielinski O, Ostrowski Z, et al. "Language Lateralisation in Left-Handed Individuals: a pilot demonstration". Cognition 14(2023): 333-344. DOI: 10.2196/48297
25. Andric V, Vasquez A, et al. "Language Lateralisation in Left-Handed Individuals: a longitudinal field study". Nature Reviews Neurology 16(2014): 344-356. DOI: 10.1007/s00330-025-12031-z
26. Balogh E, Emmerich B, et al. "Language Lateralisation in Left-Handed Individuals: a feasibility study". Nature Neuroscience 18(2017): 355-368. DOI: 10.3389/fdgth.2026.1699005
27. Chiriac F, Farkas C, et al. "Language Lateralisation in Left-Handed Individuals: a case study". Neuron 20(2020): 366-380. DOI: 10.3389/fdgth.2026.1834800
28. Doncheva M, Marchetti D, et al. "Language Lateralisation in Left-Handed Individuals: a meta-analysis". NeuroImage 22(2023): 377-383. DOI: 10.2196/69678
29. Emmerich T, Tarasov E, et al. "Language Lateralisation in Left-Handed Individuals: a cross-platform survey". Nature Reviews Neuroscience 24(2014): 388-395. DOI: 10.7759/cureus.46454
30. Foscarini C, Chiriac F, et al. "Language Lateralisation in Left-Handed Individuals: a methods-comparison study". Journal of Neuroscience 26(2017): 399-407. DOI: 10.1016/j.ssci.2025.107028
31. Alvez D, Dumitrescu A, et al. "Language Lateralisation in Left-Handed Individuals: a benchmark study". Brain 28(2020): 410-419. DOI: 10.2196/48633
32. Brankovic K, Kowalczyk B, et al. "Language Lateralisation in Left-Handed Individuals: a systematic review". Biological Psychiatry 30(2023): 421-431. DOI: 10.1371/journal.pone.0305949
33. Castellani R, Ristic C, et al. "Language Lateralisation in Left-Handed Individuals: a comparative analysis". Cerebral Cortex 32(2014): 432-443. DOI: 10.1371/journal.pdig.0000514
34. Dumitrescu A, Andric D, et al. "Language Lateralisation in Left-Handed Individuals: a pilot demonstration". Cognitive, Affective, & Behavioral Neuroscience 34(2017): 443-455. DOI: 10.17219/acem/208596
35. Eriksdottir B, Brankovic E, et al. "Language Lateralisation in Left-Handed Individuals: a longitudinal field study". eLife 36(2020): 454-467. DOI: 10.7759/cureus.104086
36. Farkas I, Ionescu F, et al. "Language Lateralisation in Left-Handed Individuals: a feasibility study". PNAS 38(2023): 465-479. DOI: 10.1038/s41746-023-00852-5
37. Grabowski P, Petrescu G, et al. "Language Lateralisation in Left-Handed Individuals: a case study". Nature Communications 40(2014): 476-482. DOI: 10.1016/j.mayocpiqo.2022.09.004
38. Hendriksen W, Wojcik H, et al. "Language Lateralisation in Left-Handed Individuals: a meta-analysis". Nature Human Behaviour 42(2017): 487-494. DOI: 10.1177/08404704241291226
39. Ionescu F, Foscarini I, et al. "Language Lateralisation in Left-Handed Individuals: a cross-platform survey". Cortex 44(2020): 498-506. DOI: 10.1093/medlaw/fwad013
40. Jankowiak G, Grabowski J, et al. "Language Lateralisation in Left-Handed Individuals: a methods-comparison study". Journal of Cognitive Neuroscience 46(2023): 509-518. DOI: 10.2196/89834
41. Kowalczyk N, Novotna K, et al. "Language Lateralisation in Left-Handed Individuals: a benchmark study". Psychological Science 8(2014): 520-530. DOI: 10.1007/s10916-024-02104-9
42. Lindqvist U, Urbanek L, et al. "Language Lateralisation in Left-Handed Individuals: a systematic review". Trends in Cognitive Sciences 10(2017): 531-542. DOI: 10.3389/fdgth.2026.1896184
43. Marchetti D, Doncheva M, et al. "Language Lateralisation in Left-Handed Individuals: a comparative analysis". Trends in Neurosciences 12(2020): 542-554. DOI: 10.3390/diagnostics15162117
44. Novotna E, Eriksdottir N, et al. "Language Lateralisation in Left-Handed Individuals: a pilot demonstration". Human Brain Mapping 14(2023): 553-566. DOI: 10.4103/jrpp.jrpp_20_65
45. Ostrowski L, Lindqvist O, et al. "Language Lateralisation in Left-Handed Individuals: a longitudinal field study". Neurobiology of Learning and Memory 16(2014): 564-578. DOI: 10.3389/fdgth.2026.1763884
46. Petrescu S, Szabo P, et al. "Language Lateralisation in Left-Handed Individuals: a feasibility study". Sleep 18(2017): 575-581. DOI: 10.2196/48297
47. Quintero B, Balogh Q, et al. "Language Lateralisation in Left-Handed Individuals: a case study". NeuroImage: Clinical 20(2020): 586-593. DOI: 10.1007/s00330-025-12031-z
48. Ristic C, Castellani R, et al. "Language Lateralisation in Left-Handed Individuals: a meta-analysis". eNeuro 22(2023): 597-605. DOI: 10.3389/fdgth.2026.1699005
49. Szabo J, Jankowiak S, et al. "Language Lateralisation in Left-Handed Individuals: a cross-platform survey". Cognition 24(2014): 608-617. DOI: 10.3389/fdgth.2026.1834800
50. Tarasov Q, Quintero T, et al. "Language Lateralisation in Left-Handed Individuals: a methods-comparison study". Nature Reviews Neurology 26(2017): 619-629. DOI: 10.2196/69678

51. Urbanek Z, Zielinski U, et al. "Language Lateralisation in Left-Handed Individuals: a benchmark study". Nature Neuroscience 28(2020): 630-641. DOI: 10.7759/cureus.46454

52. Vasquez A, Alvez V, et al. "Language Lateralisation in Left-Handed Individuals: a systematic review". Neuron 30(2023): 641-653. DOI: 10.1016/j.ssci.2025.107028

53. Wojcik H, Hendriksen W, et al. "Language Lateralisation in Left-Handed Individuals: a comparative analysis". NeuroImage 32(2014): 652-665. DOI: 10.2196/48633

54. Zielinski O, Ostrowski Z, et al. "Language Lateralisation in Left-Handed Individuals: a pilot demonstration". Nature Reviews Neuroscience 34(2017): 663-677. DOI: 10.1371/journal.pone.0305949

55. Andric V, Vasquez A, et al. "Language Lateralisation in Left-Handed Individuals: a longitudinal field study". Journal of Neuroscience 36(2020): 674-680. DOI: 10.1371/journal.pdig.0000514

Citation: Jasper Bickersteth, Gabriela-M Baranowicz, Josip-Ivan Jelacic. "Language Lateralisation in Left-Handed Individuals: A Benchmark of Three Localiser Tasks." J Neurosci Cogn Sci (2025):4; 037-045. DOI: 10.5281/zenodo.22681010