

— METHODOLOGY PAPER

METHODOLOGY · MIXED-MODE DESIGN

Mixed-Mode *Sample*

A Methodology for Combining Telephone and Online for Coverage & Feasibility

No single mode reaches every audience well. Online panel brings scale and efficiency; telephone reaches the low-incidence, senior, and hard-to-engage respondents an online frame misses. This is a vendor-neutral methodology for combining CATI and online into one coherent, mode-flagged dataset — the design patterns, the integration layer, and the discipline that keeps the two comparable.

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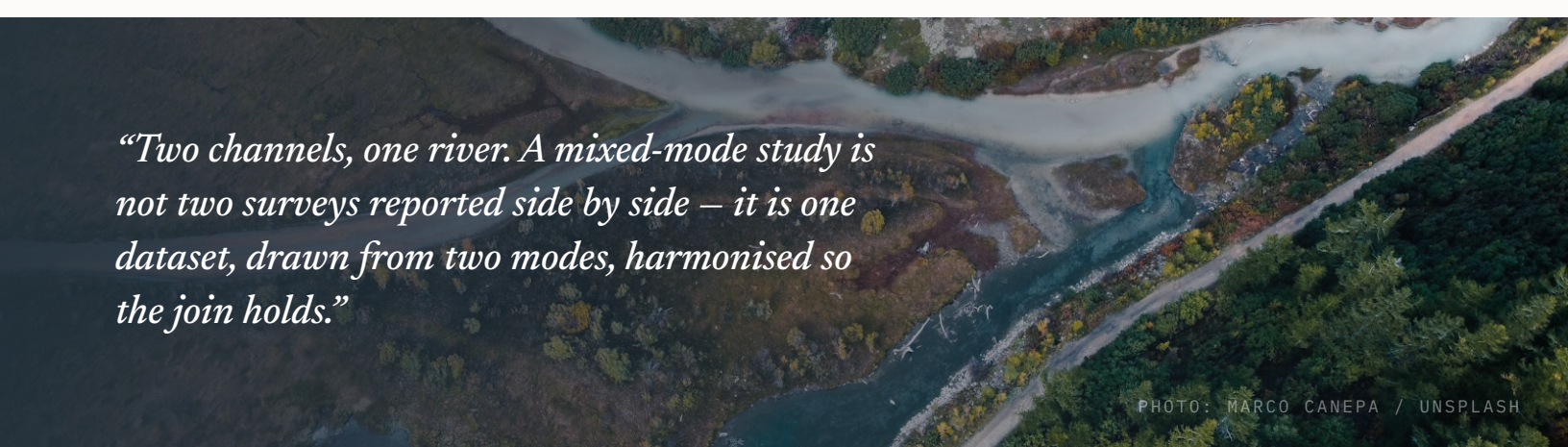
Methodology Papers

READING TIME

~16 minutes

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“Two channels, one river. A mixed-mode study is not two surveys reported side by side — it is one dataset, drawn from two modes, harmonised so the join holds.”

PHOTO: MARCO CANEPA / UNSPLASH

ABSTRACT

For many B2B and healthcare studies, no single mode is sufficient. Online panel offers scale, speed, and cost-efficiency for accessible segments; telephone (CATI) reaches the senior, niche, and low-incidence respondents who rarely engage with a panel. Forced to choose one, a researcher either accepts a coverage gap or pays for telephone where it is not needed. Mixed-mode design refuses the choice — it uses each mode where it is strongest.

But combining modes is not the same as running two surveys. The value is realised only when the two streams converge into **one coherent dataset**. This paper sets out the **four mixed-mode design patterns**; the **integration layer** — a single master screener, harmonised quotas, and a mode-flagged data file — that holds them together; the **harmonisation rules** that keep the modes comparable; the **mode effects** you accept and must make visible; and a closing **mode-effects watchlist** of diagnostics to run before trusting the merged file. It builds on Paper No. 139 (when to use CATI) and No. 140 (screen-sharing CATI).

CONTENTS

01	Why no single mode is enough	Coverage and feasibility, not preference
02	The four mixed-mode design patterns	How the two modes share the sample
03	The integration layer	One master screener, one dataset
04	Keeping the modes comparable	The harmonisation rules
05	Mode effects you must make visible	Selection, measurement, and the mode flag
06	The mode-effects watchlist	Diagnostics before you trust the merge

WHO THIS IS FOR

Research buyers and insights leads scoping a study no single mode can cover; **agency and brand researchers** designing B2B, healthcare, or hard-to-reach fieldwork; and **data and analytics teams** who will merge and interpret a combined file. No technical background is assumed; analysts can skip to the watchlist in Section 06.

01 THE PREMISE

No single mode reaches every audience well.

Mixed-mode is not a compromise or a fashion; it is a response to a coverage problem. Any one mode reaches some of a target population better than others — and for studies whose audience spans both the easily reachable and the hard-to-reach, insisting on a single mode means accepting that part of the sample will be under-covered or unaffordable. Combining modes lets each do what it does best.

What each mode contributes

ONLINE PANEL**Scale & efficiency**

Reaches accessible segments quickly and cost-effectively, at volumes telephone cannot match — ideal for the broad, digitally reachable core of a study.

TELEPHONE · CATI**Reach into the hard part**

Engages senior, niche, and low-incidence respondents through human outreach — the part of the sample an online frame under-covers or misses entirely.

The decision is therefore about **coverage and feasibility, not preference**. Use mixed-mode when online alone cannot reliably reach the whole audience, when CATI alone would be unnecessarily expensive across the easy segments, or when the design needs both scale and high-touch recruitment. The goal is total coverage at a defensible cost — not the purity of a single method.¹

THE REFRAMING

A mixed-mode study is not **“two surveys in one project.”** It is **one study fielded through two modes**, designed from the start to combine into a single, analysable dataset. Everything that follows serves that one-dataset goal.

02 THE PATTERNS

Four ways the two modes share one sample.

Mixed-mode is not a single design but a family of them, differing in how the sample is split between online and telephone. The four patterns below cover most B2B and healthcare studies; the right one depends on where the hard-to-reach part of the audience sits and what the instrument needs. The bars show the typical online / CATI balance — illustrative, not prescriptive.

PATTERN 01

Online-first, CATI supplement



The accessible core is fielded online; CATI **tops up the quotas** online cannot fill — the most common design.

PATTERN 02

CATI-first for hard quotas



Telephone leads on the **hard-to-reach quotas** first; online fills the accessible remainder where it is efficient.

PATTERN 03

Parallel fielding



Both modes run **at once under a shared screener and quota plan**, each drawing the respondents it reaches best.

PATTERN 04

Screen-share within a mixed design

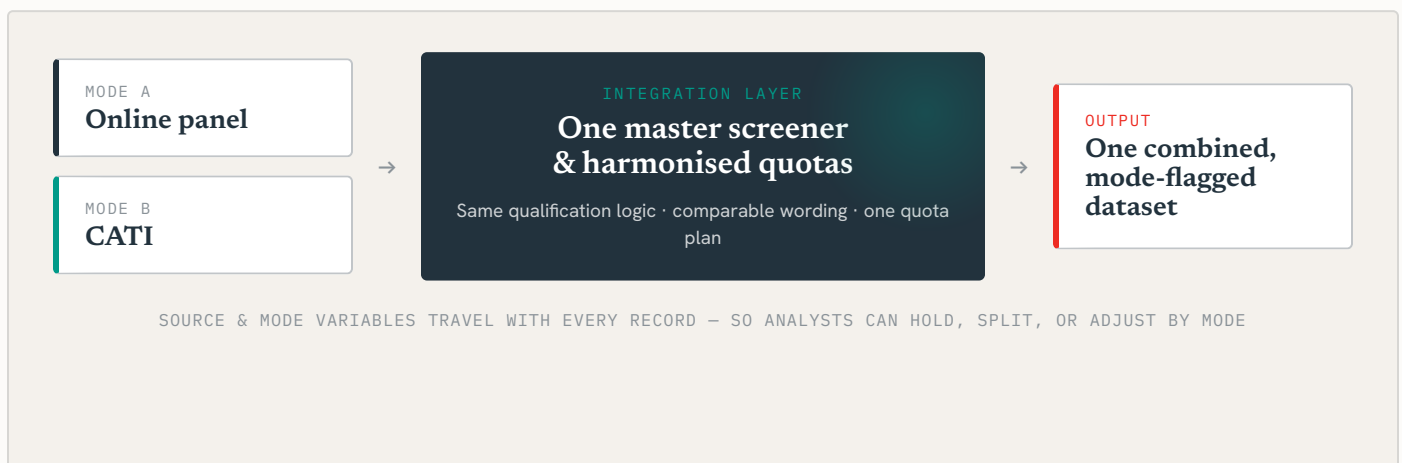


An online core, with **screen-sharing CATI** carrying the visual task for the segment that needs it (see No. 140).

03 THE ARCHITECTURE

One master screener in; one mode-flagged dataset out.

What makes a mixed-mode study one study rather than two is the layer between the modes and the data. Both modes enter through a single master screener with one quota plan; both exit into one data file that records, for every respondent, which mode produced the record. That convergence — not the fact of using two modes — is the methodology.



Why the single screener is non-negotiable

If each mode runs its own screener, the two halves qualify different people and the dataset cannot honestly be combined. One master screener guarantees that an online respondent and a CATI respondent met the same bar — the precondition for treating the merged file as a single sample.

Why the mode flag matters

Recording the mode on every record is what lets an analyst later check for, and if necessary adjust for, differences between the modes. A combined file without a mode variable has thrown away the one piece of information needed to test whether the join is sound.²

04 HARMONISATION

The merge only holds if the two modes were built to match.

A clean integration layer is necessary but not sufficient; the two modes also have to be built comparably from the start. Harmonisation is the design-time discipline that makes the post-field merge defensible — four rules that keep an online complete and a CATI complete measuring the same thing.

One master screener	A single qualification logic applied identically in both modes, so every respondent — online or phone — clears the same eligibility bar.
Comparable question wording	Items worded equivalently across modes, adapted only as far as each mode requires, so a difference in answers is not just a difference in phrasing.
Harmonised quotas	One quota and weighting plan spanning both modes, so the combined sample hits the target structure rather than two unaligned ones.
Source & mode tracking	Every record tagged with its source and mode , so the data file carries the variables needed to monitor and analyse by mode.

THE DISCIPLINE IN ONE LINE

Harmonise the **inputs** — screener, wording, quotas — at design time, and tag the **outputs** — source and mode — at capture. Do both, and the merged file is one sample; skip either, and it is two datasets wearing one cover sheet. Comparable measurement across modes is precisely how total-survey-error discipline keeps the join honest.¹

05 MODE EFFECTS

Combining modes has a cost — the discipline is to make it visible, not deny it.

Mixing modes introduces an honest complication: respondents reached by different modes can differ, and the difference has two distinct sources that are easily confused. A credible mixed-mode design names both, and uses the mode flag to keep them in view rather than buried in a combined average.

Two sources of mode difference

- ◆ **Selection effects** — the modes reach different kinds of people; an online and a CATI respondent pool may differ in composition before a single question is asked.
- ◆ **Measurement effects** — the modes can elicit different answers from similar people, through interviewer presence, pacing, or visual-versus-aural presentation.

The two are easily confounded — which is exactly why they must be separated rather than reported as one blended number.²

Why the mode flag is the safeguard

Because the mode variable rides on every record, an analyst can compare the modes directly — and, where a comparable single-mode benchmark exists, begin to separate selection from measurement. The point is not that mode effects can always be eliminated; it is that an honest study **measures and reports them** rather than letting a combined average hide them.

BUYER'S QUESTION

Ask: “**How will mode effects be checked and reported, not just assumed away?**” A credible answer names selection and measurement separately — and points to the mode flag as the means.

06 THE WATCHLIST

Four diagnostics to run before you trust the merged file.

Before a combined dataset is delivered or analysed as one, a short set of by-mode diagnostics tells you whether the join is sound. Each compares a quality signal across the two modes; a large divergence is not automatically fatal, but it is a flag to investigate before the modes are pooled. Run these as standard, not only when something looks wrong.

DIAGNOSTIC	COMPARE ACROSS MODES	WHAT A DIVERGENCE SIGNALS
Length of interview	Median LOI, online vs CATI	A large gap may indicate a different respondent experience or pacing effect to examine.
Straight-lining	Rate of flat grid answering by mode	Concentration in one mode suggests a data-quality or engagement difference, not a real finding.
Open-end quality	Substance and length of verbatims by mode	Divergence can reflect interviewer-captured vs self-typed answers — a measurement effect.
Incidence	Qualification rate by mode	A gap may reveal a selection or screener-application difference between the modes.

WHERE THIS SERIES GOES DEEPER

- No. 139 **When to use CATI.** Deciding whether telephone belongs in the design before you mix modes.
- No. 140 **Screen-sharing CATI.** The visual-task capability behind mixed-mode Pattern 04.
- No. 134 • 135 **Incidence & HCP mode-choice.** Modelling feasibility, and the mode decision for healthcare audiences.

▲ CONCLUSION

Two modes, one dataset — by design, not by accident.

Mixed-mode sampling earns its place when no single mode can cover an audience affordably: online for scale, telephone for the hard-to-reach part, combined for total coverage and feasibility. But the value lives entirely in the join. A mixed-mode study succeeds only when the modes enter through one master screener, are built comparably, exit into one mode-flagged dataset, and have their mode effects measured rather than assumed away. Done with that discipline, the result is genuinely one sample drawn from two channels; done without it, it is two surveys sharing a cover sheet. Recognised survey-quality and conduct frameworks let buyers ask for the difference in consistent terms.^{3,4}

§ REFERENCES

- [1] Biemer, P. P., & Lyberg, L. E. **Introduction to Survey Quality**. Hoboken, NJ: John Wiley & Sons, 2003. (Total survey error and comparing data quality across modes and sources.)
- [2] Vannieuwenhuyze, J. T. A., Loosveldt, G., & Molenberghs, G. **"A Method for Evaluating Mode Effects in Mixed-Mode Surveys."** Public Opinion Quarterly 74, no. 5 (2010): 1027-1045. (Separating selection effects from measurement effects in mixed-mode data.)
- [3] ICC/ESOMAR. **International Code on Market, Opinion and Social Research and Data Analytics**. ICC & ESOMAR. (Standardised conduct and transparency across data-collection modes.)
- [4] International Organization for Standardization. **ISO 20252:2019 — Market, opinion and social research, including insights and data analytics — Vocabulary and service requirements**. Geneva: ISO, 2019.

References are cited for the survey-quality and methodological frameworks they establish — total survey error, the separation of selection and measurement mode effects, and quality-management requirements — not for any operational figure transferred to this paper. The online / CATI proportions shown in Section 02 are illustrative, not benchmarks. This paper publishes no feasibility, incidence, or completion-rate statistics; any such number is study-specific. "Aligned to ISO 20252" denotes conformance with the

Tell us the audience, the quotas, and where coverage is hardest — and we'll design the mixed-mode split, then return a modelled feasibility range, typically within 24 hours.

§ ABOUT

CatalystMR

CatalystMR is a global market-research panel and fieldwork partner specialising in **hard-to-reach B2B, healthcare, and niche audiences**. We run CATI and online panel sample from a single point of contact, applying **one master screener and a common quality standard across both modes** — and mode-flagging every record so a combined file can be analysed as one.

For mixed-mode work we harmonise screener logic, question wording, and quotas at design time, and monitor completion quality by source so the merge is defensible, not assumed.

Compliance posture: our methodology is aligned to the ESOMAR Code and Guidelines and the ISO 20252 framework, and we are certified under the EU-U.S., UK, and Swiss Data Privacy Frameworks, with personal data siloed from response data.

MIXED-MODE

CATI + ONLINE

COVERAGE

MODE EFFECTS

ESOMAR CODE

ISO 20252

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