

METHODOLOGY PAPER

DATA QUALITY · SPEEDER DETECTION

Speeder *Detection*

A Methodology for Catching Speeders Without Discarding Fast Readers

A respondent who finishes too fast to have read the questions is a data-quality risk — but a single universal time cutoff is a blunt tool that removes genuine fast readers and misses paced speeders. This is a vendor-neutral guide to calibrated speeder detection: where speed is measured, what sets the threshold, and why timing is a flag to corroborate, not a verdict to act on alone.

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“The question is never simply ‘how fast is too fast?’ It is ‘too fast for this instrument, this device, this reader’ — and what else, besides the clock, agrees.”



PHOTO: WILLIAM WARBY / UNSPLASH

ABSTRACT

Speeder detection identifies respondents who complete a survey too quickly to have read and answered with care. Very short response times are a well-documented indicator of low attention and reduced data quality — which is why timing is one of the most valuable quality checks in online and CATI-supported research. But it is also one of the easiest to get wrong: a blunt, universal time cutoff removes legitimate fast readers and lets calibrated, human-paced speeders through.

This paper sets out **calibrated** speeder detection. It explains why **one threshold is not enough**; maps the **four timing layers** where speed is measured; names the **instrument factors** that set a sensible threshold; argues that **speed is a flag, not a verdict** and must be corroborated before removal; and shows how calibration **protects the genuine fast reader**. It closes with a calibration maturity ladder. It is the timing deep-dive behind one of the five integrity questions of Paper No. 142, and the companion to the straight-lining study of No. 144.

CONTENTS

01	Why one threshold is not enough	The blunt-cutoff problem
02	The four timing layers	Where speed is measured
03	What calibrates the threshold	Five instrument factors
04	Corroborate before you cut	A second signal before removal
05	Protecting the fast reader	Avoiding over-removal
06	The calibration ladder	From blunt cutoff to corroborated timing

WHO THIS IS FOR

Research buyers and insights leads who see "speeders removed" on a QC report and want to know how; **agency and brand researchers** fielding timed online or mixed-mode studies; and **data-quality teams** calibrating removal rules. No technical background is assumed; practitioners can skip to the timing layers in Section 02.

01 THE PREMISE

A universal time cutoff fails in both directions at once.

It is tempting to detect speeders with a single rule — "remove anyone who finishes in under X minutes." It is also wrong. A five-minute tracker and a twenty-five-minute conjoint demand completely different standards, and a fixed cutoff applied across them either discards careful-but-quick respondents on the short study or waves through inattentive ones on the long study. The blunt threshold errs in both directions simultaneously.

The two errors a blunt cutoff makes

FALSE POSITIVE

Discarding fast readers

A literate, motivated respondent on a short, familiar survey can answer accurately and quickly — and be wrongly removed, biasing the surviving sample toward the slow.

FALSE NEGATIVE

Missing paced speeders

An inattentive respondent who keeps just above a fixed cutoff — or paces a long survey carelessly — passes the test while contributing low-quality data.

Response behaviour also varies within a single respondent across a survey — careful on some pages, hurried on others — so even one person rarely has a single "true" speed. Detecting too-fast responses page by page is more defensible than branding a whole respondent on one total-time number.² The implication is the throughline of this paper: a threshold is something you **calibrate**, corroborate, and apply with judgement — not a universal number you set once.

THE REFRAMING

The useful question is never "how fast is too fast?" in the abstract. It is "**too fast for this instrument, this device, this respondent — and does anything else agree that this complete is careless?**"

02 WHERE TO MEASURE

Speed shows up in four places — measure all of them.

"Too fast" is not one number; it is a pattern visible at several levels of a survey. A strong system reads timing at four layers, because a respondent who looks acceptable on total time can still race a critical grid, and a page-level stall can explain an otherwise-fast complete. Each layer catches something the others miss.

LAYER 01 Total LOI Overall length of interview against the modelled time the instrument should take. THE WHOLE SURVEY	LAYER 02 Page dwell time Time spent on each page or screen — catching the page someone skipped through. PER PAGE / SCREEN	LAYER 03 Grid completion speed Pace through matrix and grid questions, where careless speed most often hides. PER GRID	LAYER 04 Open-end response time Time taken on verbatims — a few seconds rarely yields a considered answer. PER OPEN-END
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A COMPLETE IS READ ACROSS ALL FOUR LAYERS — NOT JUDGED ON TOTAL TIME ALONE

WHY PAGE-LEVEL BEATS SURVEY-LEVEL ALONE

Because attention drifts within a survey, a **page- and question-level** view detects the specific too-fast responses a total-time average would hide — and protects a respondent who was simply quick overall but careful where it counted. The layers are read together, weighing where the speed occurred, not just how much there was.²

03 THE CALIBRATION

Five factors set a sensible threshold — not a stopwatch.

A defensible threshold is derived, not declared. It reflects how long this survey should genuinely take a careful respondent — which depends on the instrument, the audience, and the channel. The five factors below move the line; together they replace a universal cutoff with a threshold tuned to the study in front of you.

01	Reading load	The word count and density a respondent must actually read — longer, denser instruments raise the minimum plausible time.
02	Task complexity	Conjoint, MaxDiff, and tradeoff exercises demand deliberation ; simple single-punch questions do not. Complexity lengthens the floor.
03	Device type	Reading and tapping on a phone differs from a desktop; thresholds calibrated to one device misjudge the other.
04	Language	Reading speed and instrument length vary by language ; a cutoff set for one market should not be transplanted to another untouched.
05	Open-end & stimulus count	Each verbatim or visual stimulus adds genuine, variable time; more of them widens the band a real respondent can occupy.

A PRACTICAL WAY TO SET THE LINE

Rather than guess an absolute number, strong practice anchors the threshold to the **distribution of the study's own timings** — for example, flagging responses a set fraction below the median page or survey time — so the line is calibrated to how this instrument actually behaves, layer by layer, rather than to a number carried over from another study.²

04 CORROBORATION

Remove on speed alone only when the time is physically impossible.

A calibrated timing flag is strong evidence, but rarely conclusive by itself. Unless a completion time is flatly impossible — faster than the survey could be read at all — speed should be corroborated before a complete is removed. The strongest detection treats timing as one signal among several, and acts when they agree.

Signals that corroborate a speed flag

 Straight-lining Attention checks Duplicate signals Open-end quality Screener consistency

Speeding and **straight-lining** in particular tend to travel together — a respondent racing a grid is more likely to flat-line it — so a speed flag that coincides with straight-lining is far more convincing than either alone.¹

When speed alone is enough

There is one exception to corroboration: a time that is **physically impossible** — a multi-minute instrument "completed" in seconds — needs no second signal. Short of that, a lone speed flag should raise scrutiny, not trigger automatic deletion, precisely to avoid discarding the fast-but-careful respondent.

BUYER'S QUESTION

Ask: "**Does a speed flag remove a complete on its own, or does something else have to agree?**"

"Speed alone, automatically" over-removes;

"speed plus corroboration" is the defensible rule.

05 OVER-REMOVAL

Over-removal is a data-quality failure too.

Speeder detection is usually framed as catching bad respondents. The other half — keeping good ones — matters just as much. Every legitimate fast reader wrongly removed is a real, qualified opinion deleted from the sample, and if the removed share leans a particular way, the deletion biases the result. Aggressive timing rules can quietly degrade data in the name of cleaning it.

Who a blunt rule wrongly removes

- ◆ **Fluent, motivated readers** who genuinely answer quickly on a familiar topic.
- ◆ **Experts** for whom the subject is second nature and the questions are easy.
- ◆ **Repeat panellists** who recognise a recurring instrument and move efficiently.
- ◆ **Short, simple surveys** where fast completion is normal, not suspicious.

How calibration protects them

The same disciplines that catch real speeders are what spare the fast reader: a **calibrated** threshold sets the floor where careful-but-quick is still plausible; a **page-level** view credits the respondent who was thorough where it mattered; and **corroboration** means a quick complete is removed only when other signals confirm carelessness. Detection that protects good data does both jobs at once.

THE BALANCE TO HOLD

Set thresholds **conservatively enough to catch the impossible**, but require corroboration before removing the merely fast — replacing borderline cases rather than deleting good ones outright.

06 THE LADDER

Three rungs from blunt cutoff to corroborated timing.

Speeder detection matures in steps. The ladder below shows the progression from the weakest approach — a single number for every study — to the strongest, where calibrated, multi-layer timing is corroborated before anyone is removed. Each rung up reduces both errors: fewer real speeders missed, fewer fast readers lost.

1

WEAKEST

Blunt universal cutoff

One time threshold applied to every survey. Over-removes fast readers on short studies; misses paced speeders on long ones. Errs in both directions.

2

BETTER

Content-aware threshold

The cutoff is calibrated to the instrument — reading load, complexity, device, language — and read at multiple timing layers. Right-sized, but still timing-only.

3

STRONGEST

Calibrated & corroborated

Calibrated, multi-layer timing is corroborated against straight-lining, consistency, and open-end quality before removal — catching real speeders while protecting the genuine fast reader.

↑ FEWER SPEEDERS MISSED · FEWER FAST READERS WRONGLY REMOVED

WHERE THIS SERIES GOES DEEPER

No. 142	Respondent validation. Speeders are one of the five integrity questions; this paper is its timing deep-dive.
No. 144	Straight-lining. The response-pattern signal that most often corroborates a speed flag.
No. 137 · 138	QC framework & fraud detection. The process and the wider signal stack timing sits inside.

▲ CONCLUSION

Calibrate the clock; corroborate the flag.

Speeder detection is one of the most valuable data-quality checks in survey research and one of the easiest to do badly. A single universal cutoff fails in both directions — discarding the fast-but-careful reader while missing the paced speeder. The durable approach measures speed across the four timing layers, calibrates the threshold to the instrument, audience, and device, treats a timing flag as evidence to corroborate rather than a verdict to enforce, and removes the merely fast only when another signal agrees. Detection done this way protects the finding from careless completes and from over-zealous cleaning — catching speeders without discarding fast readers. Recognised conduct and service-quality frameworks let buyers ask for that rigour in consistent terms.^{3,4}

§ REFERENCES

- [1] Zhang, C., & Conrad, F. G. “Speeding in Web Surveys: The Tendency to Answer Very Fast and Its Association with Straightlining.” *Survey Research Methods* 8, no. 2 (2014): 127-135. (Speeding as a satisficing indicator; its link to straight-lining.)
- [2] Greszki, R., Meyer, M., & Schoen, H. “Exploring the Effects of Removing ‘Too Fast’ Responses and Respondents from Web Surveys.” *Public Opinion Quarterly* 79, no. 2 (2015): 471-503. (Page-wise thresholds; within-respondent timing variation; effects of removal.)
- [3] ICC/ESOMAR. **International Code on Market, Opinion and Social Research and Data Analytics**. ICC & ESOMAR. (Conduct and transparency in quality control.)
- [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 documented relationship between speeding and data quality, the page-wise threshold methods and within-respondent timing variation they establish, and the conduct/quality frameworks referenced — not for any operational figure transferred to this paper. This paper publishes no speeder-rate, removal-rate, or threshold-value statistics; every threshold is study-specific and modelled from the instrument's own timings. “Aligned to ISO 20252” denotes conformance with the standard's framework, not third-party certification; any turnaround estimate is a modelled feasibility range, not a guarantee.

§ ABOUT

CatalystMR

CatalystMR is a global market-research panel and fieldwork partner specialising in **hard-to-reach B2B, healthcare, and niche audiences**. We review response timing at the survey and question level as part of a broader quality framework, **calibrating thresholds to each instrument** and corroborating speed flags before a complete is removed — protecting clients from fast, unreliable data without over-removing legitimate fast readers.

Borderline completes are **replaced rather than silently deleted**, so a study keeps both its quality and its planned base.

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.

SPEEDER DETECTION

SURVEY TIMING

CALIBRATION

DATA QUALITY

ESOMAR CODE

ISO 20252

Ask us how we'd set and corroborate speeder thresholds for your study — calibrated to your instrument, not a universal cutoff — and we'll return a modelled feasibility range, typically within 24 hours.

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