

The num=100 Effect: Why Deep Research Feels Shrinks

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X & LinkedIn have been firing lately. Impressions are falling, clicks are flat, and rankings are jumping all over the place. Two websites in my Search Console shocked me the most. At first, I suspected the August spam update. But after checking GA4, I could finally breathe again.

Figure

Figure

Then I saw tweets from Brodie, Aleyda, and Glenn. “Okay, there’s a thing,” I thought.

For the last three months, I’ve been working and experimenting with two websites *mostly for AI search*. Over the last 12 months, impressions nearly doubled. So you can imagine what went through my head when I first saw that sudden decline.

These two websites are optimized with **BM25** and **paragraph-level structuring**. My philosophy has been simple:

- **Good SEO = Good AI Search**
- **Best AI Search = Good SEO + RAG optimization** (not coining a new term here, just my view)

But here’s the tension: aiming for the *best AI search performance* sits on a thin line. If you optimize purely for AI search, your traditional SEO performance can be affected. There are ways to serve pages specifically for LLMs, and that’s very different from how hybrid search or Google’s deterministic ranking works.

I’m not saying some LLMs rely only on Google for their web search; they’ll always find a way.

However, I wanted to test it.

I ran a small experiment on how many sources AI tools now show when asked for “deep research.” The results were surprising:

- **ChatGPT:** [19 sources this time^{\[1\]}](#), compared to 40+ before.

Figure

This was from two months ago.

- **Perplexity**: 20 results, down from ~52 previously. (They are saying 42 sources in average)

Figure

Deep Research stuck with 20 sources. <https://www.perplexity.ai/search/how-have-us-tariffs-affected-c-PmKcKyEPTBqPac.ouTcQLg>^[2]

- **Claude Deep Research**: still working like a charm. No major drop in coverage.

Figure

It looks like the “**num=100 effect**” is kicking in: AI assistants are quietly limiting the number of visible sources, even if they fetch more internally. This may be due to stricter filtering, token/output limits, or cost/performance trade-offs.

A mini conclusion

The drop from 40–50 sources down to ~20 isn’t a coincidence; defaults have shifted. For now, Claude feels more generous, while ChatGPT and Perplexity appear to have tightened their filters. Screenshots tell the story best, but the takeaway is simple: **always check what’s missing, not just what’s shown.**

16 September 2025 testings;

Figure

Perplexity is telling me Pro Search allows me to check/see/summarize 3x more sources. Let's try it.

Figure

Figure

The num=100 effect explains why deep research in AI engines feels smaller than it should. AEO programs that ignore it overestimate how many candidates ChatGPT, Perplexity and Gemini actually consider for AI citations. Answer engine optimization works inside that ceiling.

REFERENCES & SOURCES

[1] 19 sources this time — <https://chatgpt.com/share/68c9359e-49e4-8011-890c-720cddb358e2>

[2] <https://www.perplexity.ai/search/how-have-us-tariffs-affected-c-PmKcKyEPTBqPac.ouTcQLg> — <https://www.perplexity.ai/search/how-have-us-tariffs-affected-c-PmKcKyEPTBqPac.ouTcQLg>