

Using machine translation to create subtitles

Research shows that automatic subtitles without professional editing:



Can be hard to follow because they move too quickly, aren't segmented clearly, and often include spelling mistakes or mistranslations.



Can get close to the quality of human-made subtitles with a lot of editing, but they only work well on their own in very specific cases.



Are seen by most viewers to be of poor quality.

What do viewers say about automatic subtitles?

- Most viewers find them frustrating — too fast, out of sync, hard to follow, inconsistent, and full of spelling mistakes.

“Some groupings of words were easily read in the amount of time they appeared on the screen, but some groupings were gone before I could finish reading them.”

“Sometimes the spelling is atrocious. Really dreadful so I'm lost, can quickly lose the thread of what is meant to be taking place in the studio because of the terrible spelling mistakes that are made.”

- Viewers tend to rate subtitles more negatively when they believe they were generated automatically, even if the actual quality isn't very different.
- Viewers accept that automatic subtitles can be useful in urgent situations, like breaking news, but aside from urgent situations, they expect much better quality.

Can automatic subtitles be the answer?

- They're faster and cheaper than human-made subtitles, which makes them especially useful for big projects or tight deadlines.
- They enable viewers to grasp the gist of the content when a deeper understanding is not required.
- They perform better with factual, literal or low-value content and with closely related languages.



BUT!

Research shows they often fall short in ways that hurt both understanding and enjoyment. A 2021 survey of 15,000 people found that 65% had stopped watching a movie or TV show when the subtitles were of poor quality.

Where professional editing matters most

A 2024 study found that when automatic subtitles are thoroughly edited by a skilled professional, they can be just as clear and easy to follow as subtitles created entirely by humans, making the content more enjoyable and easier to understand.

The key areas where professional editing really matters are:

Reading speed



Automatic subtitles don't follow style guidelines or take into account viewers' reading abilities or the type of content being shown.

Risk: If subtitles move too fast, viewers miss information and quickly become tired and frustrated. Research shows that once subtitles hit around 20 characters per second (including spaces), people skip more than a third of the words - and feel less sure about what they've understood.

Subtitle synchronisation



Automatic subtitles are often out of sync with the audio or visuals, especially when the sound quality is poor or the speech is unscripted.

Risk: When subtitles don't match what's happening on screen, it distracts viewers and makes the content less engaging. People also tend to see content with poorly synced subtitles as a sign of lower overall quality.

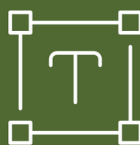
Shot changes



Automatic subtitles often run straight across scene cuts.

Risk: When subtitles spill over into a new shot, viewers end up re-reading text they've already seen — which is especially jarring with sharp, sudden cuts.

Text segmentation



Automatic subtitles usually split lines based only on character limits. This means sentences get cut in the wrong places, with lines ending on little words like “the,” or “of.”

Risk: When subtitles break in awkward spots, they're harder to follow — which makes the viewing experience less smooth and enjoyable.

Punctuation



Machines do not understand the nuances of grammar and meaning, so automatic subtitles often end up with missing or incorrect punctuation.

Risk: Bad punctuation makes subtitles harder to read and distracts from the story, leaving viewers less engaged.

Spelling



Machines struggle with accents, background noise, multiple speakers, and specialised terms. As a result, automatic subtitles frequently contain spelling mistakes (especially character names and places).

Risk: Spelling errors make subtitles harder to read, distract viewers, and pull their attention away from the content.

Mistranslation



Machines can't pick up on cultural context or visual details that help shape a story. Add challenges like accents, background noise, and overlapping voices, and the result is often inaccurate subtitles.

Risk: Mistranslations that change or blur meaning make viewers miss important details — and sometimes even receive the wrong message. Once viewers notice an error, they tend to doubt the subtitles altogether and start spotting even more mistakes.

Details on studies reviewed for this report as well as their methodologies, can be found here.

Visit the **Subtitling Audiences Network** [website](#)

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