

The Usability of Persistent and Non-Persistent Headers by Pietro Murano

I would like you to think about some web sites you use regularly. You might be scrolling up or down and looking at something or reading some information and as you do this, the header might move away, or it might stay in place. Have you noticed this behaviour? If you have, which do you prefer?

What I have just described in brief is about the behaviour of headers on a web site. Today, specifically, I will be talking about the usability of Persistent and Non-Persistent Headers, linked with universal design.

So what are Persistent and Non-Persistent Headers?

Well, my introduction will have given you some clues, but if you are a regular web site or app user, I am almost certain you will have interacted with Persistent and Non-Persistent Headers.

Certain website designers use headers on web pages as part of their design. Three main styles are available. These are persistent (sticky) headers, non-persistent headers and partially persistent headers. A persistent header is when the header of a website or app remains in the same place on the screen while the user scrolls down the page. The converse of this is a non-persistent header. This disappears from view when a user scrolls down. A partially persistent header will disappear when a user scrolls down but will reappear as soon as the user begins to scroll up again. A user will not have to scroll all the way to the top for the header to reappear.

In terms of design and development, it is possible to have any of these three kinds of headers on a web site or an app, but the main question that to me as a researcher in computer science and specifically in user interfaces is interested in, is which of these is more usable? That is key!

Online, one will find various articles that make suggestions on this topic, but at the time of publishing an article on this topic, we did not find any systematic peer reviewed articles or sources to shed light on the question with some kind of evidence for it.

At Oslo Metropolitan University in our computer science department, we set out to try and study the issue and get some evidence to whatever findings we observed.

We decided initially to focus on Persistent and Non-Persistent Headers on laptop type sized screens. So this means we did not specifically study partially persistent headers or any header in relation to mobile screen sizes which as you know are generally a lot smaller.

An experiment was designed to test the two types of headers. Two prototype web sites were built to look like a typical news web site. Both web sites were identical, but varied in that one had persistent headers, i.e. the headers were always present irrespective of a user's interaction or scrolling, while the other had non-persistent headers, i.e. as the user started to scroll down, the header would disappear.

It is not always easy to determine the usability of a feature such as this, but typically we can get indications by looking at aspects of user performance and users' personal opinions.

For performance, we looked at how long a task took under each type of header. We also looked at mouse clicks, particularly incorrect mouse clicks. So, what were the incorrect mouse clicks?

Incorrect clicks were categorized as clicks on the incorrect article, incorrect header element that is not leading to the correct article asked for in the current task, or other clicks that are not either on the article they are looking for or the correct navigation element.

We tried to find out personal opinions by means of a questionnaire that asked some questions about experience in using these headers. Altogether 24 people took part in our study.

The tasks I mentioned were all involving finding 10 specific news articles pre-determined by us. Naturally, finding the articles would then bring into play the headers we have spoken about.

So, what did we find out? It was interesting.

We did some statistical analysis on the data collected and we found that the time to find the articles we had asked users to find was much faster when users used the persistent header web site. That was the web site where the header remained unmoved. Or in other words finding the articles was much slower with the movable header.

The data for incorrect clicks did not show any differences. In fact, each web site incurred exactly the same amount of wrong clicks.

And what did the users think about each type of header? We designed a questionnaire with a few questions for this.

All questions showed quite categorically preference for the interaction involving the header that did not move – the persistent header.

Specifically, our main questions were about whether the header used appropriate space on the screen compared to the rest of the content on the web page, whether the web page felt satisfying in relation to the amount of space and clutter, whether the motion and responsiveness felt satisfying to the users and how easy it was to find the desired navigation elements.

Most users also said they would prefer to have persistent headers over the non-persistent headers.

In addition, we asked our group of users to write some free form comments. Of those who wrote something, those who preferred the persistent header said that they preferred persistent headers due to easier navigation and needing to scroll less. Only one person wrote something in favour of non-persistent headers. And they suggested that they like to focus on the main content when scrolling. We also had a very small percentage of our users who indicated no preference for a header type.

This was a very interesting investigation and it suggests to us some important things about web page design.

The first is that when it comes to user interface design there are many well-established guidelines that if applied would help avoid some of the problems we see in web pages

and in software applications. For example, the seven universal design principles are very clear.

When we talk about universal design it essentially means that the design of products and environments need to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

The results we obtained indicate that Principle three of the universal design principles – ‘Simple and Intuitive Use’ is more adhered to if designs use persistent headers. One of the most common comments received from the users was about the navigation being easier under the persistent header web page. This was in line with the significantly faster task times under the persistent header condition.

Our results further indicate that Principle six – ‘Low Physical Effort’ is more adhered to under the persistent header condition. The faster task times could imply that there was less physical effort under the persistent header condition. Some users also stated that the persistent header enabled them to do less scrolling, which also implies less physical effort.

I would further suggest the results link with Principle four – ‘Perceptible Information’. Perceptible information means that the design communicates necessary information in an effective way to the user, regardless of the ambient conditions or the user's sensory abilities.

Since the persistent header is in view all the time, the user interface is allowing the user to perceive the information at all times and therefore not require extra interactions or thoughts, other than thinking about which selection to make. So, we have better perceptible information.

I would also suggest that despite these guidelines being specifically about universal design, if we get the universal design part correct, we will be going a long way in improving usability.

The findings in our investigation also link well with Shneiderman's Golden Rules of Interface Design and Nielsen's 10 Usability Heuristics for User Interface Design. Both of which have been around for a long time.

So in connection with headers, what is the solution? Is it simply to only have persistent headers? Well, if as a designer we were hypothetically forced to make a choice, then our results suggest that it would be better to implement persistent headers.

However, there is another option that as far as I have seen, has not been tried much and that is to have an easy option to select which kind of header we as a user want to have.

The default could be to have persistent headers, since this seems to satisfy more users than the non-persistent headers. But there should be an option that is available all the time to toggle between one kind of header behaviour and another. And that option should be easy to find. It should not be deeply embedded in a whole series of settings.

This would fit with our findings as well, because a minority of users did prefer the non-persistent headers.

Overall, we suggest that persistent headers foster better performance and more user acceptance than non-persistent headers. We suggest therefore to design for this and even better include an easy option for the user to change the behaviour of a header.

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