Authors: Camila Fonseca and Nicole Geymeier

Survey context

Our target audience for this survey is a mix of people with various tech-backgrounds (or lack of it), above the age of 18.

We want to have an english (main), portuguese and german version (will do the translations after feedback and pilot, so the english survey is finished and won't change)

We want to have a 15min and a 30min version (the 30min version consisting of the 15min with additional (open-ended) questions - e.g. marked with a symbol)

Survey

Limesurvey link: https://umfragen.uni-paderborn.de/index.php/253898?lang=en

<u>Title</u>: Human Factors in Security and Privacy

Description:

Research project looking into how computer Security and Privacy interacts with people's daily lives.

Welcome message:

Thank you for taking time to participate in our survey!

The survey will take ca. 15 minutes.

No question is truly mandatory, so you may decline to answer, for any reason.

There are a few questions marked with ◆ (optional). Those will extend the duration of the survey to a max. of 30 minutes, and will provide us with extra insight beyond the bare minimum required for our research.

We don't want to test your knowledge and won't judge your answers - we are truly interested in any and all responses. :)

Introduction

Q21 - [Not At All Familiar/ Slightly Familiar/ Somewhat Familiar/ Moderately Familiar/ Extremely Familiar] Are you familiar with the concepts of digital security and privacy?

Digital Security relates to securing yourself online - passwords, accounts, and devices, for example. Digital privacy has to do with protecting your data, especially online, from being misused or accessed by others.

- Q1 Do you think your measures to protect your (online) privacy and security are appropriate (for your needs)?
- → 1 (inappropriate) 2 (slightly inappropriate) 3 (neutral) 4 (slightly appropriate) 5 (appropriate)

Measures

- Q5 [5-point Likert Scale] Each statement below describes a specific security behavior. Please indicate how often you follow the respective behaviors. There are no wrong answers.
- (0 Prefer not to answer , 1 Never, 2 Rarely, 3 Sometimes, 4 Often, 5 Always)

I set my computer screen to automatically lock if I don't use it for a prolonged period of time. I use a password/passcode to unlock my laptop or tablet.

I manually lock my computer screen when I step away from it.

I use a PIN or passcode to unlock my mobile phone.

I change my passwords, even if I don't have to.

I use different passwords for different accounts that I have.

When I create a new online account, I try to use a password that goes beyond the site's minimum requirements.

I include special characters in my password, when it's not mandatory.

When someone sends me a link, I open it without first verifying where it goes.

I know which website I'm visiting based on its look and feel, rather than by looking at the URL bar.

I submit information to websites without first verifying that it will be sent securely (e.g., SSL, "https://", a lock icon).

When browsing websites, I mouseover links to see where they go, before clicking them.

If I discover a security problem, I continue what I was doing because I assume someone else will fix it.

When I'm prompted about a software update, I install it right away.

I try to make sure that the programs I use are up-to-date.

I verify that my anti-virus software has been regularly updating itself.

- Q5.1 [free text] Do you use other security or privacy related measures, we did not list?
- Q2 [Yes/No] Have you had any security/privacy-related incident in recent memory? (For example, you've received a phishing email, found a copy-cat of a popular website designed to steal unsuspecting clients' money, or were a victim of a ransomware attack.]

Q2.1 - [Follow-up, yes/no] Did the incident(s) drive you to adopt any new measures or behaviors?

Q2.1.1 - [optional, free text field] What were those?

- Q3 [Optional, yes/no] Have you had moments where you know your adopted security/privacy measures protected you?
 - Q3.1 -[Follow up if positive, *Optional, free text]*Do you know how or why they helped to protect you?
- Q4 [Optional, yes/no] Have you had moments where you know your adopted security/privacy measures failed to protect you?
 - Q4.1 -[Follow up if positive, *Optional, free text]*Do you know how or why they failed to protect you?

Emotional Impact/Effect

Conclusion of security measures:

Device Securement (automatically lock, password/code for laptop/tablet and phone, manually locking when stepping away)

Password Generation (different passwords for different accounts, special characters, change passwords)

Proactive Awareness (Verifying links before clicking, checking URLs of websites, verifying secured websites, react on security problems)

Updating (install software updates right away, keep programs up-to-date, verify anti-virus software is updating itself)

- Q6 After seeing common security and privacy measures, do you think your measures to protect your (online) privacy and security are appropriate (for your needs)?
- → 1 (inappropriate) 2 (slightly inappropriate) 3 (neutral) 4 (slightly appropriate) 5 (appropriate)

(removed Q7)

Q8 - How do you feel regarding the existing measures you have taken? (cross all that fit) [checkboxes]

→ I'm annoyed by them

I don't mind them

I'm happy with them

I feel protected by them

I do not feel protected by them

I feel they are not enough

I feel they are not useful

I do not think about them

Other: (textbox)

- Q9 Do you feel like you would be able to take further measures?
- → No. I don't know more measures I could take

No, I don't know how to do them or it is too complicated (but I know more measures)

[Followup] What measures do you have in mind? [textbox]

Yes, I would be able to do it (technically) or would be able to find out how to do it [Followup] What measures do you have in mind? [textbox]

- Q10 [Yes/No] Do you feel the need to take further measures?
 - Q10.1 [Follow up, only when yes, Yes/No] Do you know which measures (you do not already take) you would take first?
 - Q10.1.1 [Follow up, only when yes, Yes/No] What are they?
- Q11 What do you think are reasons why you do not use available options? (cross all that fit) [checkboxes]
 - I don't understand them
 - I don't think it is worth it (e.g. too complicated setup or usage for what it "helps")
 - I don't have time for them.
 - I don't know about them
 - I don't know where to start
 - I don't think it matters / it would help anything
 - I already do so much, it feels too much to do furthermore
 - I don't care
 - I already do all of them / all I know
 - Other: (textbox)

Q12 - Which of the following do you find are accurate to describe yourself, regarding Security & Privacy?

(cross all that fit) [checkboxes, mix the pos / neg answers]

- I feel not knowledgeable enough about this topic
- I enjoy doing something in this topic
- I feel that it does not matter what _measures/actions I take to protect myself

- I feel proud of what I'm doing to protect myself
- I feel like I don't do enough to protect myself
- I feel satisfied / comfortable with what I'm doing to protect myself
- I feel overwhelmed with the amount that could be done to protect myself
- I feel like I'm having power / control about my own privacy
- I feel ashamed regarding what I'm doing (or not doing) to protect myself
- I feel powerless to protect myself (enough)
- It is only a rational, objective topic for me / I do not have any emotions about this topic
- None of the above
- Other: (textbox)

Background

- Q13 (yes/no) Did/do you study for a CS/IT-related area?
- Q14 (yes/no) Did/do you work in an area related to CS/IT?
- Q15 (optional, open ended) Please describe your CS/IT-Related education / field of work.
- Q16 To what extent do you agree or disagree with the following statements?
- Q 16.1 [Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree] I can complete my tasks/goals while operating a computer.
- Q16.2 [Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree] I can solve problems that may come up while operating a computer.
 - Q18 [Optional, Open ended] Describe your perceived proficiency level with a computer.
 - Q19 [Yes/No] Do you have any experience programming?
 - Q19.1 [Followup, Yes/No] Do you have any professional experience programming?
 - Q19.2 [Followup, Yes/No] Do you have personal projects related to software/hardware?
 - Q20 [Not at All/Rarely/Sometimes/Often/Always] Do you think about your privacy or security online?
 - Q22 [Yes/No] Do you have professional experience surrounding Security & Privacy topics?

Demographics

These questions are only for assessing the homogeneity of the respondents demographics and will not be used for the research itself. We will use only aggregated demographics in our paper.

Q23 - What is your gender?

[Checkboxes - Male/Female/Non-Binary/Prefer to self-describe [textbox]/Prefer not to answer]

Q24 - What is your age?

[Radio buttons - 18-25, 26-35, 36-45, 46-55, 55-65, > 65]

Endmessage:

Thank you very much for participating in our survey!

Are you interested in the results of our research and want to receive the paper, once it is finished? Then click here to submit your email address.

Your email address will be stored separately from your previous answers, so they will not be connected in any way.

Your email will not be used for any other purposes such as marketing, nor will it be shared with third parties or stored in a publicly accessible database. It will be disposed of as soon as the results are sent.

If you want to have a look at some of the mentioned security/privacy measures, here are some resources that may be helpful!:

- Recommendations from the US cyber defense agency https://www.cisa.gov/news-events/news/4-things-you-can-do-keep-yourself-cyber-safe
- A password manager can help to manage passwords, especially if you're using long, complicated passwords (a)
 https://bitwarden.com/
- A website, where you can check, whether your email address has been in a data breach https://haveibeenpwned.com/

2nd survey (optional)

Limesurvey link: https://umfragen.uni-paderborn.de/index.php/982293?lang=en

Q1: (mandatory) Insert your email-address, if you want to receive the results of this survey.

End message:

We thank you for your interest! It is estimated that these results will be available around the end of January.