Personal Password Usability Survey

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The usability scientists are conducting an independent research project on password usability. Passwords are the source of many cartoons and office jokes. These cartoons and jokes are not based on good scientific data but rather on anecdotal evidence.

This survey asks questions about accounts and passwords that you use personally, outside of your work. We don't want your actual passwords. We do want to understand:

- how many personal accounts and passwords you have
- what strategies you use to create and manage your passwords
- your opinions on the password requirements for those accounts.

Your input will help us to provide a sound scientific basis that can inform password policies in the future. The results of this survey will be used to improve the usability of passwords and the login process. Thank you for your help!

Taking the survey is completely voluntary and anonymous. No personally identifiable information will be collected.

It takes about *30 minutes* to complete the survey.
Please use the "Next" or "Back" button at the bottom of each page to navigate within the survey.

All questions are optional.

About your personal accounts

Before you begin, please think about all of your **personal, not work-related, accounts** (including computers) that require logins.

1. Do you have **personal accounts** in the categories listed below that require a **password**? If yes, enter the number of accounts in that category and select how often you use those accounts; if no, select "Never."

	Number of accounts	Several times a day	About once a day	Several times a week	About once a week	Several times a month	Several times a year
Email	_____	O	O	O	O	O	O
Personal computers requiring passwords	_____	O	O	O	O	O	O
Mobile devices requiring passwords (e.g., smartphones, tablets)	_____	O	O	O	O	O	O
Social Networks (e.g., Facebook, MySpace, Twitter)	_____	O	O	O	O	O	O
Online Chat/Instant Messaging	_____	O	O	O	O	O	O
Banking online	_____	O	O	O	O	O	O
Bill payment online	_____	O	O	O	O	O	O
Shopping online	_____	O	O	O	O	O	O
Financial management online (e.g. investment, 401K)	_____	O	O	O	O	O	O
Healthcare management online (e.g. health insurance, Medicare)	_____	O	O	O	O	O	O
Classifieds/auctions online (e.g. Craigslist, ebay)	_____	O	O	O	O	O	O
Entertainment online (e.g. music, videos/movies)	_____	O	O	O	O	O	O
Games online	_____	O	O	O	O	O	O
News online	_____	O	O	O	O	O	O

If you have other personal accounts not listed above, please describe the nature of the account(s): _____

2. How often do you use the **same password** for **different personal accounts**?

- O Never or almost never
- O Less than half of the time
- O About half of the time
- O More than half of the time
- O Always or almost always

Comments: _____

Questions about Passwords for Personal Email

3. How many **personal email accounts** do you have? _____

4. What **strategies** do you use to create the passwords of your **personal email accounts**? (check all that apply)

- ☐ Create from a password root, where a few characters are always the same (e.g., 2PwdRt&, PwdRt42%, or tXpwdRT@)
- ☐ Let system assign password
- ☐ Make minor change(s) to an existing password (e.g., %elvis1, #elvis2, or $elvis3)
- ☐ Recycle old passwords (e.g., old passwords that are not in current password history)
- ☐ Use a common name, word, or phrase (e.g., Boston12)
- ☐ Use a meaningful or pronounceable mnemonic (e.g., 2beOrnOt@toBee from "to be or not to be")
- ☐ Use a random combination of words, letters, or characters
- ☐ Use character repetitions (e.g. !!!AAAbbb999)
- ☐ Use existing passwords from other accounts
- ☐ Other –describe strategies generically. Do **not** provide an example of an actual password or enough information to guess your password _____

5. How **important** are these **considerations** to you when you create the password of a **personal email account**?

	Not at all Important	Only a little Important	Somewhat Important	Very Important
Easy to enter/type	O	O	O	O
Easy to remember	O	O	O	O
Strong, i.e., hard to guess/crack	O	O	O	O
Synchronized with passwords for other accounts	O	O	O	O
Compliant with the password requirements	O	O	O	O

Comments: _____

6. How do you **keep track** of the passwords of your **personal email accounts**? (check all that apply)

- ☐ Memorize the passwords
- ☐ Let browser/computer auto-fill
- ☐ Use mnemonics, e.g. meaningful or pronounceable phrase
- ☐ Rely on hints provided by the computer

- ☐ Do not track, use "forgot password" feature
- ☐ Share with someone (e.g., a family member or friend)
- ☐ Write entire password down on paper and place in a non-locked location
- ☐ Write entire password down on paper and store securely in a locked location
- ☐ Write down on paper, but disguise in some way (e.g. only write down the common word without the special characters)
- ☐ Save in a document/file, protected with encryption or password
- ☐ Save in a document/file, not protected (i.e. without encryption or password)
- ☐ Use password management software
- ☐ Store in unencrypted electronic devices, e.g., USB key, PDA, cell phone, etc.
- ☐ Store in encrypted electronic devices, e.g. BlackBerry
- ☐ Other – please describe _____

7. In your opinion, how **secure** are the passwords of your **personal email accounts**?

- O   Not at all secure, i.e. very easy to guess/crack
- O   Slightly secure
- O   Moderately secure
- O   Very secure
- O   Completely secure, i.e. extremely hard to guess/crack
- **O**   Don't know

8. In general, what do you think of the **password requirements** for your **personal email accounts**?
(e.g., password length, use of special characters, password expiration, etc.)

- a.   **Password length** - minimum number of characters required
  - O   Too short
  - O   About right
  - O   Too long
  - O   Don't know/No opinion

  In your opinion, what should the **length** of your **personal email passwords** be? (e.g. , 6, 8, or 12 characters, etc.) _____

- b.   **Complexity of the password requirements** – combination of letters, numbers, and special characters
  - O   Too complex
  - O   About right
  - O   Too simple
  - O   Don't know/No opinion
  - Comments: _____

- c.   **Password expiration**- how often do you need to change the passwords of your personal email accounts?
  - O   30 days or less
  - O   31 - 60 days
  - O   61 - 90 days

O   91 - 120 days

O   121 - 180 days

O   181 days or more

O   Change only as needed (e.g., new accounts, or accounts hacked, etc.)

In your opinion, how **many days, weeks, or months** should a **personal email password** last before it expires and you have to change it? _____

9. What **consequences**, do you think, would there be if the passwords of your **personal email accounts** were **compromised**?

_____

Questions about Passwords for Personal Computers requiring passwords
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Mobile devices requiring passwords
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Social Networks
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Online Chat/Instant Messaging
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Banking Online
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Bill Payment Online
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Shopping Online
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Financial management Online
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Healthcare management Online
(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)
Questions about Passwords for Classifieds/Auctions Online

(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)

Questions about Passwords for Entertainment Online

(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)

Questions about Passwords for Games Online

(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)

Questions about Passwords for News Online

(only appears if the respondent checks the associated account type in Q1 on the 1st page; same questions as in Email accounts, but tailored to this account type.)

Questions about Login Problems with your Personal Accounts

10. In the past 6 months, how much **frustration** and **time** have these **problems** caused you?

a. Frustration with login problems

	None	A little	Some	A lot
Forgetting your User name or ID	O	O	O	O
Forgetting your password	O	O	O	O
Forgetting your PIN	O	O	O	O
Forgetting which password goes with which account	O	O	O	O
Getting locked out of an account	O	O	O	O
Mistyping a password	O	O	O	O
Getting error messages when trying to change a password	O	O	O	O
Getting error messages when trying to recover a password	O	O	O	O
Dealing with slow or unhelpful system support	O	O	O	O
Valid password rejected for unclear reason	O	O	O	O
Other, please describe below	O	O	O	O

If "Other", describe problem(s): _____

b. Time Wasted on login problems

	None	A little	Some	A lot
Forgetting your User name or ID	O	O	O	O
Forgetting your password	O	O	O	O
Forgetting your PIN	O	O	O	O
Forgetting which password goes with which account	O	O	O	O
Getting locked out of an account	O	O	O	O
Mistyping a password	O	O	O	O
Getting error messages when trying to change a password	O	O	O	O
Getting error messages when trying to recover a password	O	O	O	O
Dealing with slow or unhelpful system support	O	O	O	O
Valid password rejected for unclear reason	O	O	O	O
Other, please describe below	O	O	O	O

If "Other", describe problem(s): _____

Usability and Cyber Security

11. Tell us about any overall **strategy** you use to manage your passwords for **different personal accounts**.

(An example of such strategy is to have 3 passwords with different security levels: a strong password for accounts with great importance to you; a medium-strength password for less important accounts; and a low-strength password for accounts that are more casual.)

_____

12. How do you feel about the **amount of effort** it takes you to **create and manage passwords** to do what you want to do online?

_____

13. The last time you had **difficulty creating a password**, what happened? What caused the problem? What did you end up doing?
(We don't want to know the password you were trying to create, we just want to know what happened.)

_____

    13a. For the situation you just described, how **typical** is that? How **many times** would you say this has happened in the **last 6 months**?

      _____

14. Have you ever had **training** about **online security**?
- O   Yes
- O   No
- O   Don't know

    14a. If yes, how **useful** is the training in helping to protect you when performing online activities?
- O   Not at all useful
- O   A little useful
- O   Somewhat useful
- O   Very useful

    Comments: _____

15. What would be the **ideal login process** for you with your personal accounts?

_____

Demographic Information

1. Gender:
- O   Male
- O   Female

2. Age:
- O   25 and under
- O   26-35
- O   36-45
- O   46-55
- O   56-65
- O   66 and above

3. Highest education (degree/level attained):
- o   High school or equivalent
- o   Associate degree
- o   Bachelor's degree
- o   Master's degree (e.g. MS, MA, etc.)
- o   Doctoral degree (e.g. PhD)
- o   Professional degree (e.g. MD, JD, etc.)
- o   Other

If Other, please specify _____

4. Occupation:
- o   Accounting/Finance/Insurance
- o   Administrative/Clerical
- o   Banking/Real Estate/Mortgage Professionals
- o   Biotech/R&D/Science
- o   Building Construction/Skilled Trades
- o   Business/Strategic Management
- o   Creative/Design
- o   Customer support/Client care
- o   Editorial/Writing
- o   Education/Training
- o   Engineering
- o   Food Services/Hospitality
- o   Homemaking
- o   Human Resources
- o   IT/Software Development
- o   Installation/Maintenance/Repair
- o   Legal
- o   Logistics/Transportation
- o   Manufacturing/Production/Operations
- o   Marketing/Product
- o   Medical/Health
- o   Project/Program Management
- o   Quality Assurance/Safety
- o   Retired
- o   Sales/Retail/Business Development
- o   Security/Protective Services
- o   Unemployed
- o   (Other)

If Other, please specify _____

5. Your level of experience using computers:
- O   Novice
- O   Average
- O   Advanced

O   Expert

Thank you for taking our survey. Your response is very important to us.
If you are interested in future research on password usability, please contact us at
dana@usabilityworks.net

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