

4 Common Mistakes With Error Messages (and How to Fix Them)

Last updated: August 11, 2017



400. That's an error.

Your client has issued a malformed or illegal request. That's all we know.



Your users will make mistakes. It's inevitable. That's what error messages are for – but so many companies are doing them poorly, and they're pissing off potential customers in the process.

So, how can we better design error messages to increase user experience, and therefore, increase conversions?

Error Message Errors and How They Affect UX



to create an account, only to receive a message like this.

Help: List of Password Rules

1. The password must be **exactly** 8 characters long.
2. It must contain **at least** one letter, one number, and one special character.
3. The **only** special characters allowed are: @ # \$
4. A special character must **not** be located in the first or last position.
5. Two of the same characters sitting next to each other are considered to be a "set." No "sets" are allowed.
6. Avoid using names, such as your name, user ID, or the name of your company or employer.
7. Other words that cannot be used are Texas, child, and the months of the year.
8. A new password cannot be too similar to the previous password.
 - a. Example: previous password - abc#1234, acceptable new password - acb\$1243
 - b. Characters in the first, second, and third positions cannot be identical. (abc*****)
 - c. Characters in the second, third, and fourth positions cannot be identical. (*bc#****)
 - d. Characters in the sixth, seventh, and eighth positions cannot be identical. (*****234)
9. A password can be changed voluntarily (no Help Desk assistance needed) once in a 15-day period. If needed, the Help Desk can reset the password at any time.
10. The previous 8 passwords cannot be reused.

[Top of page](#)

It's the type of thing that makes you want to drop what you're doing and break something, right?

Another terrible experience is when an error message is ambiguous, probing you to ask, "well, why was that wrong?!" [Craig Sullivan](#) has a [great example](#) about Amazon:

The screenshot shows an Amazon UK shopping cart with three items: a Spear & Jackson Select Stainless Border Spade, a Minky Trio Concertina Plus Ailer - 21 m, Silver, and a Stewart G2 x 41.5 x 28cm Large Heated Propagator. The cart total is £234.29. A promotional code HNG4FOR3 is entered, but the message says it cannot be applied. A large red "WHY?" is overlaid on the error message.

WHY?

! The promotional code you entered cannot be applied to your purchase.

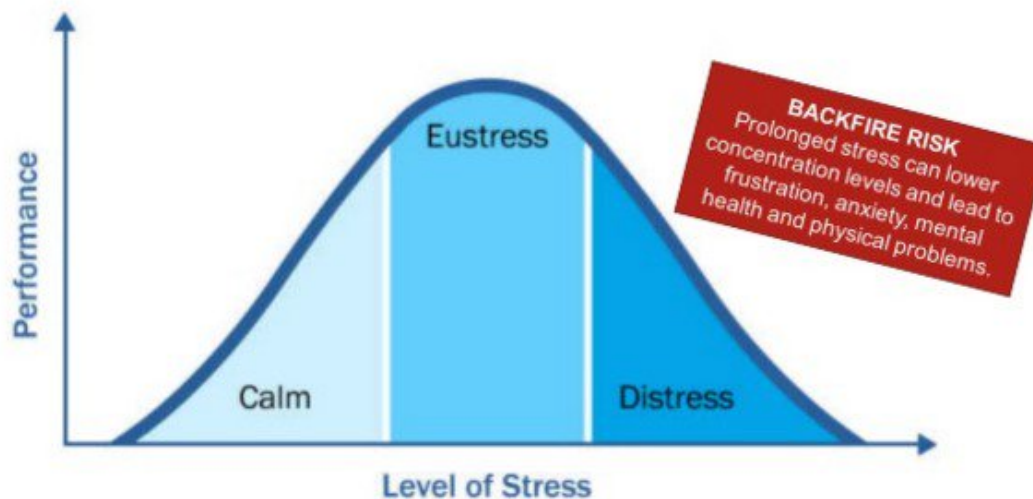
Craig Sullivan
@OptimiseOrDie

OK, @AmazonUK - here is the picture. Tell me WHY, instead of this useless error message - stop WASTING my time :

2:10 PM - Dec 7, 2015

cortisol buildup can turn into anxiety, and eventually, when a user is sufficiently frustrated, they give up.

Cortisol and the stress response



AlterSpark @cugelman

20

Image Source (via [Brian Cugelman](#))

Sometimes, the damage isn't only sustained to the lost conversion, but it also turns someone into an active detractor of your brand. Investing in a better user experience tends to work in the short term (increased conversion rate) as well as the long term (increased retention, brand loyalty, word-of-mouth, etc).

While error messages seem like a dry topic compared to value proposition optimization or gamification, you can vastly improve your user experience just by avoiding a few common mistakes.

A Case Study in Poor Error Message Design



it rightly). It warmed my heart to note that their error messages were also subpar.

So I started out my form by messing up everything (I'm not a savvy digital citizen):

The screenshot shows a registration form titled "REGISTER". At the top left, there is a link "<- Back to Login". A red error box with white text says "Title is required. Please complete this field to continue." pointing to the "TITLE" field. The form fields are: TITLE (dropdown menu), FIRST NAME (text input with "ALEX"), MIDDLE NAME (text input), LAST NAME (text input with "B"), and SUFFIX (dropdown menu). Below these is the "DATE OF BIRTH" section with dropdowns for month (June), day (6), and year (2015). To the right of the date is an "IMPORTANT" note: "Enter your first, middle, last name and any suffix, exactly as it appears on your government ID that you plan to use at the airport." Below the date is the "EMAIL" field (text input with "a@gmail") and the "CONFIRM EMAIL" field (text input with "a@yahoo"). At the bottom are the "PASSWORD (6-12 CHARACTERS)" and "CONFIRM PASSWORD" fields, both masked with asterisks. A black "REGISTER" button is at the bottom center.

Uh-oh, I didn't inform them I was a Mr....Well, I fixed that, but then I was informed I had another error!

This screenshot shows the same registration form after the user has selected "Mr." for the title. A red error box with white text says "Email address is invalid" pointing to the "EMAIL" field. The "DATE OF BIRTH" section now shows "June", "6", and "2015". The "CONFIRM EMAIL" field still contains "a@yahoo". The "PASSWORD" and "CONFIRM PASSWORD" fields are still masked. The "REGISTER" button remains at the bottom center.

Email invalid? Good call. Forgot the .com. Can fix that up rather easily:

Mr. ALEX B

DATE OF BIRTH* June 6 2015

IMPORTANT
Enter your first, middle, last name and any suffix, exactly as it appears on your government ID that you plan to use at the

EMAIL* a@gmail.com

CONFIRM EMAIL* a@yahoo

PASSWORD (6-12 CHARACTERS)*

CONFIRM PASSWORD*

Email and Confirm Email must match

REGISTER

But what is this? I also seemed to have had a typo in my matching email! I wish they'd informed me about that when I was fixing my first email :(

The email address you entered already is being used by a FREE SPIRIT account, please try another one

Fields marked with a star (*) are required.

TITLE* Mr. FIRST NAME* ALEX MIDDLE NAME LAST NAME* B SUFFIX

DATE OF BIRTH* June 6 2015

IMPORTANT
Enter your first, middle, last name and any suffix, exactly as it appears on your government ID that you plan to use at the airport.

EMAIL* a@gmail.com

CONFIRM EMAIL* a@gmail.com

PASSWORD (6-12 CHARACTERS)*

CONFIRM PASSWORD*

REGISTER

Well. Apparently someone signed up with my email already. I guess that'd be okay, but I wish they'd have given me a 'password recover' option in case that was my email. Oh, and maybe they could have left the passwords I tried to enter in the fields here. Dammit.

Not all forms are that bad, but many have the same common mistakes. Avoid them and you'll be ahead of much of your competition. Here are some common mistakes:

Your error messages should clearly define what the problem was. Ever got a message like the following?

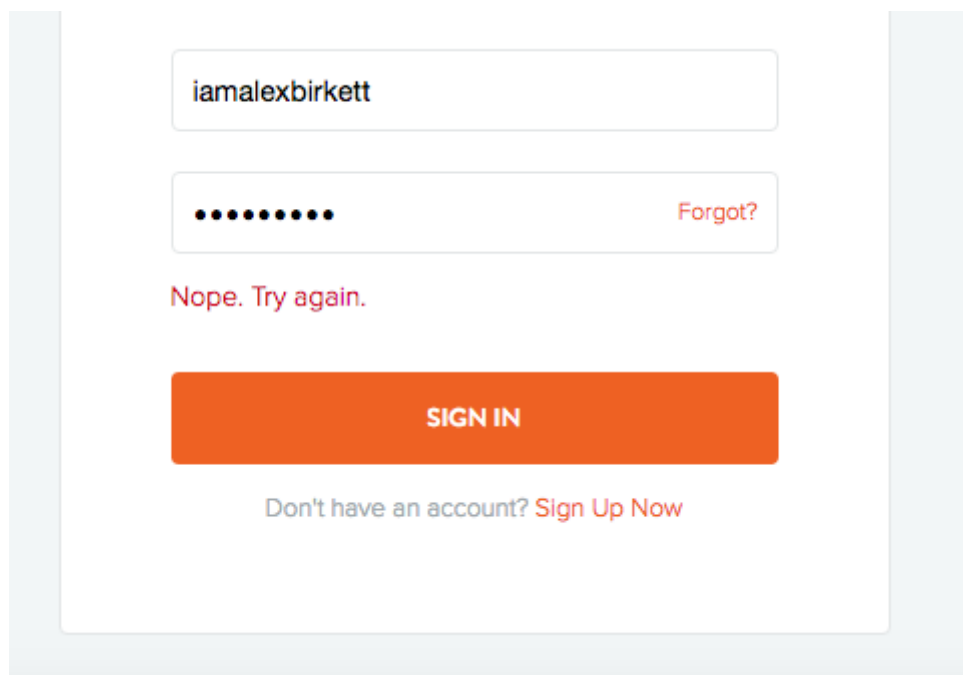


Your email could not be sent.

[Image Source](#)

Why? What the hell do I do now?

Bitly sort of pissed me off with this error message, because it doesn't tell me what was wrong. Username? Password? Both? Who knows. "Nope," also sounds kinda condescending/not helpful. Finally, best practice is to tell me how to fix it, but I got nothin'...



iamalexbirkett

..... [Forgot?](#)

Nope. Try again.

SIGN IN

[Don't have an account? Sign Up Now](#)

That's a common one. I love it, though, when a form clearly demarcates your errors from the valid submissions. Meetup.com shows you exactly where the problem occurred and what to do about it:



The screenshot shows a 'Sign up' form for Meetup. It includes fields for 'Your real name' (filled with 'john johnson'), 'Your email' (filled with 'john@gmail.com'), and 'Pick a password'. The 'Location' section has a 'Country' dropdown set to 'USA' and an empty 'ZIP code' field. A red error message, 'Please enter your zip code.', is displayed below the ZIP code field. At the bottom, there is a 'Remember me on this computer' checkbox and a 'Sign up' button. A disclaimer at the bottom states: 'By clicking the "Sign up" or "Sign up using Facebook" buttons below, you agree to Meetup's Terms of Service'.

Bottom line is, don't make your users think. Let them know exactly where the error was, why it happened, and what to do about it. Improve your clarity.

Mistake #2: Condescending Language/Blaming the User

One thing you definitely don't want to do is scare the user into thinking the problem is much worse than it is. You also don't want to make them feel stupid, like it's their fault.

As Usabilla put it, "It is also important to be humble, admit you've made a mistake if you have. However, even if it is a user error we're dealing with, NEVER blame the user." They gave a hyperbolic example of this, but it's actually pretty common:



[Image Source](#)

[UXMovement cautions against](#) using negative words, saying “negative words can make users feel like they’ve made a huge mistake, leading them to think the situation is worse than it is.” They also offer a few words to avoid:

Negative Words to Avoid in Your Form Error Messages

Oops	Oops, something wasn't right
Error	✖ This Form Has Errors
Failed	Form submission failed!
Problem	There was a problem creating your account
Invalid	Invalid Fields
Wrong	Oops, something has gone wrong
Prohibited	3 errors prohibited this user from being saved

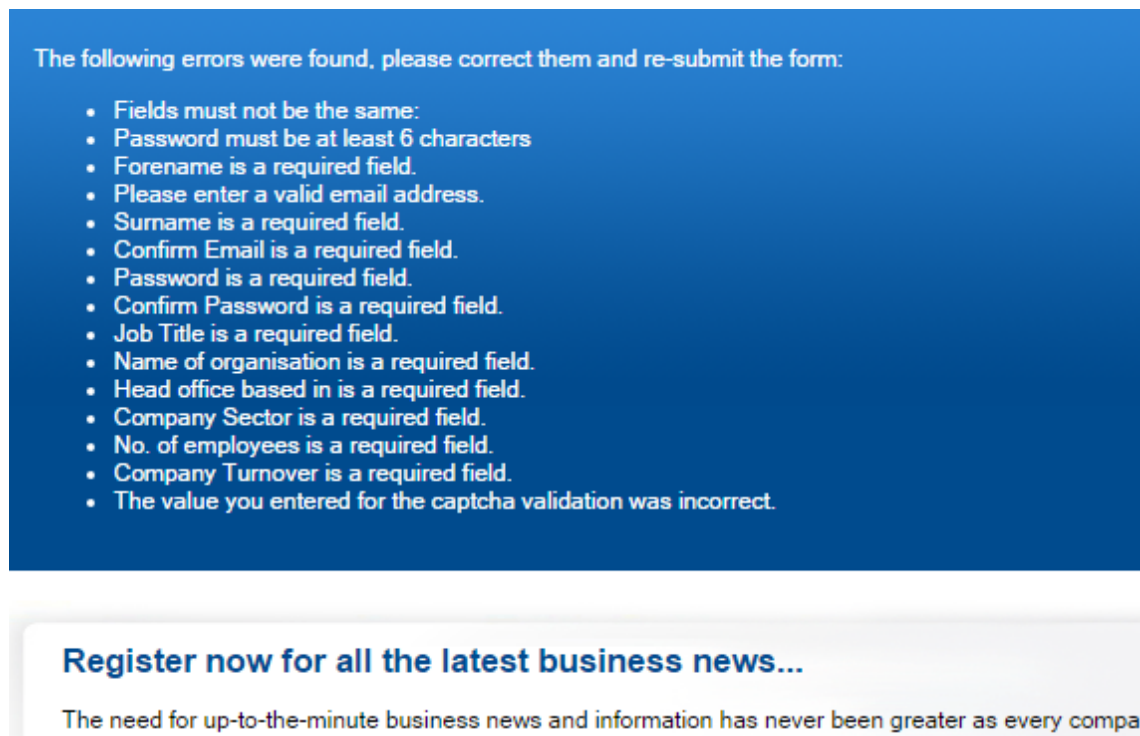
[Image Source](#)

Mistake #3: Poor Placement Error Messages

reassuring.

” *“Error summaries magnify the seriousness of the mistakes when they’re grouped in a long bulleted list. When most users see that many errors at once, they’ll likely give up and forget about fixing them.”*

What’s more intimidating than seeing something like this after you hit ‘submit’?



[Image Source](#)

I like [inline validation](#) to solve this one, because you get instant feedback, which is [great for learning](#). More on inline validation later in the article.

But even if you’re not planning on using inline validation, at least make it clear where the error occurred. Positioning of error messages isn’t thought about often, but it’s important. Here’s [how Usabilla put it](#):

” *“Finally, the positioning of your error messages are key. This all comes down to good User Experience design practice. Logical positioning not only saves you*



going wrong and – that word again – recover:

The following example is better than placing it all at the top, but it's still pretty bad because you can't tell where the actual error was (e.g. 'name cannot be empty' is between first and last name, making it ambiguous):

Title:	<input type="text" value="Mr."/>	<input type="text" value="Mr."/>
First name:	<input type="text"/>	<input type="text" value="Name cannot be empty"/>
	Name cannot be empty	
Last name:	<input type="text"/>	<input type="text" value="Name cannot be empty"/>
Email Address:	<input type="text"/>	<input type="text"/>
	Please enter valid password	
Passwords:	<input type="password" value="*****"/>	<input type="text" value="Please enter valid password"/>
Confirm Password:	<input type="password" value="*****"/>	<input type="text" value="Please enter valid password"/>
Address line 1:	<input type="text"/>	<input type="text" value="Enter a valid address"/>
	Enter a valid address	
Address line 2:	<input type="text"/>	<input type="text" value="Enter a valid address"/>
Postcode:	<input type="text"/>	<input type="text"/>

[Image Source](#)

Users need to know where the error occurred. As [Hazel Bolton](#) from [Formisimo](#) noted, Netflix is guilty of displaying error messages above the form and only highlighting the error fields red. As she said, “the error could be missed or the fields hard to locate”



Start your **FREE** trial

Email Address
Example: Cindy@aol.com

Create a Password

Re-type Password
4-10 characters (case sensitive)

Enter Zip Code



Secure Server

Continue

[Google has some design best practices documentation on this. Read up.](#)

Mistake #4: Unclear Expectations

This mistake is so common and it's so important to get it right. Even if you have a nice and apologetic message, place it in the right spot, and make it clear what went wrong, you'll still anger users if it's not at all clear what they're supposed to do next.

Many error messages don't give you a solid next step. Like the example from Spirit Airlines above, they could have given me a few options such as 'account recovery' or 'oh, you have an account? log in here.' Instead, they just said my email had already been registered.



Fields marked with a star (*) are required.

TITLE*	FIRST NAME*	MIDDLE NAME	LAST NAME*	SUFFIX
Mr. ▾	ALEX		B	▾
DATE OF BIRTH*		IMPORTANT		
June ▾	6 ▾	2015 ▾	Enter your first, middle, last name and any suffix, exactly as it appears on your government ID that you plan to use at the airport.	
EMAIL*			CONFIRM EMAIL*	
a@gmail.com			a@gmail.com	
PASSWORD (6-12 CHARACTERS)*			CONFIRM PASSWORD*	

REGISTER

A better option comes from [Wells Fargo](#) (surprisingly):

✖ We do not recognize your username and/or password. Please try again or visit [Username/Password Help](#).

Enter your username and password to securely view and manage your Wells Fargo accounts online.

Sign on to Account Summary ▾

Username

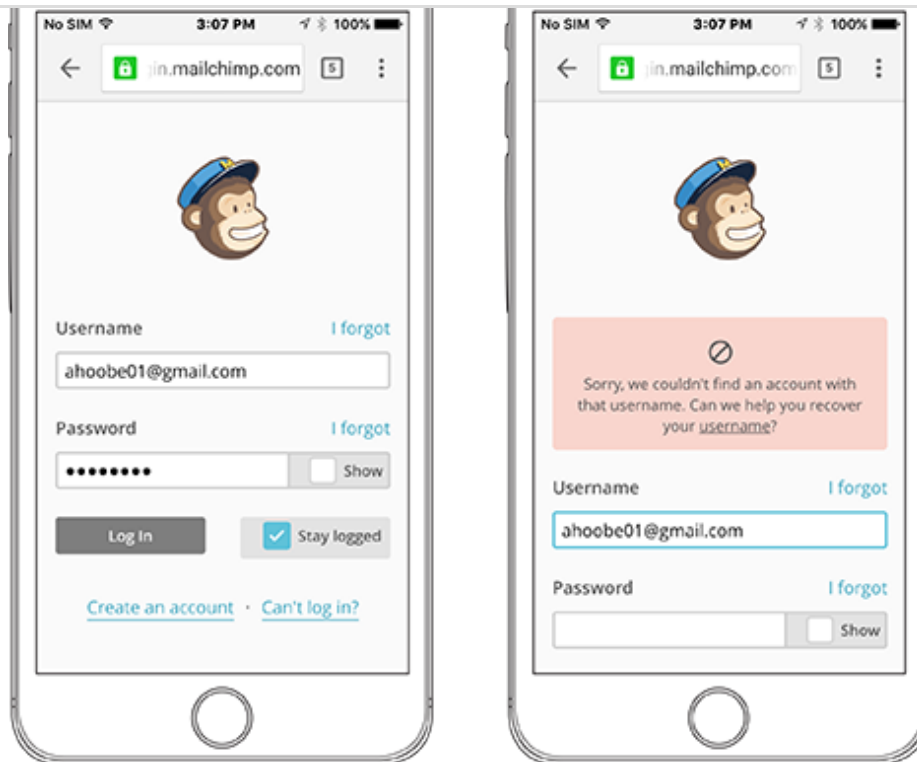
Password

☐ Save Username

[Username/Password Help](#)

Don't have a username and password? [Sign Up Now](#)

A superior error messages takes the opportunity to educate the user on how to fix it. Look at how great [MailChimp](#) is at suggesting a solution to the problem:



[Image Source](#)

Even better, if you're not flexible with the format of certain data, like phone numbers and zip codes (which you should be), then it's nice to let users know what to expect upfront. To do that, you can write some microcopy.

Using Microcopy to Prevent Errors in the First Place

Microcopy is defined as “the small bits of text/copy that help instruct and alleviate the concerns of your users.” It can help prevent form errors before they ever happen.

For example, Joshua Porter noticed he was getting a ton of form errors on the “enter billing information” page. So he added a tiny bit of copy to remind users to enter the billing address associated with their credit card, and noticed the errors went away, “thus saving support time and increasing revenue on the improved conversion”



Card Type:

Card Number:

Expiration date:

Security Code: [How to find this on your card](#)

(Be sure to enter the billing address associated with your credit card)

First Name:

Last Name:

Here's another example of where microcopy could have helped:

WHAT'S ON TAP DRINKS VENUE MUSIC CALENDAR **EVENTS** ABOUT SOCIAL MERCHANDISE

There was a problem with your submission.
Errors have been highlighted below.

Name *
Peep
First Last

Address *
Street Address

Address Line 2

Austin TX
City State / Province / Region
 United States
Postal / Zip Code Country

Phone Number *
- - -
####

Email *

Event Date *
03 / 29 / 2016
MM DD YYYY

Start/Finish Time *
7pm to midnight

Number of guests *

Please enter a numeric value.

Peep was trying to fill out a form on a venue's website in order to get a quote for an event.

problem with your submission at the top – message plagued with ambiguity of course.

The error was that he entered a range of guests (rational choice, seeing as it's hard to state an exact number of guests for events), but they wanted an exact number. Of course, they didn't mention this before he hit 'submit.' Microcopy explaining to estimate an exact number would have been helpful.

(Though, with this example, I think there form has more problems than simply a lack of microcopy).

Error Message Best Practices

Good error messages and bad ones have such different results in terms of user behavior. [Read this anecdote from UX pro Jennifer Aldrich:](#)



Jennifer Aldrich:

“One day I had two users sitting right next to one another in a lab, one of them working in a 3rd party program and another working in our product. They happened to error out simultaneously. The 3rd party product displayed a giant red X, with the word ERROR in all caps and a pile of crazy script beneath it. The user gasped, closed the browser and shot back in his chair like the screen had tried to bite him.

The user who received the error in our product read a message similar to, “Something weird just happened on our end, sorry about that. Please refresh your screen and try that again.” The error code was listed in small text below the message, as well as an expand option for folks to view the error details if they so desired.



screen and continued editing.



[Image Source](#)

While I can't tell you exactly what text, placement, color, timing, etc will work on your site, I can tell you some design staples and best practices. Then you can dive into some usability research, form analytics, and testing to figure out what works best for your own site.

Error Message Best Practices That Have Lasted Through The Years

[NN/g offered](#) the following best practices in 2001 and they still hold up:

- Visible and highly noticeable, both in terms of the message itself and how it indicates which dialogue element users must repair.
- Preserve as much as the user's work as possible. Let users correct errors by editing their original action instead of having to do everything over again. For example, in presenting search results, show a search box with the user's original query terms to facilitate revisions. If no hits were found, let users search a wider scope with a single click.

let users pick it from a small list of fixes. For example, instead of just saying “city and zip code don’t match,” let users click on a button for the city that matches the zip code they entered.

The 4 H’s of Error Messages

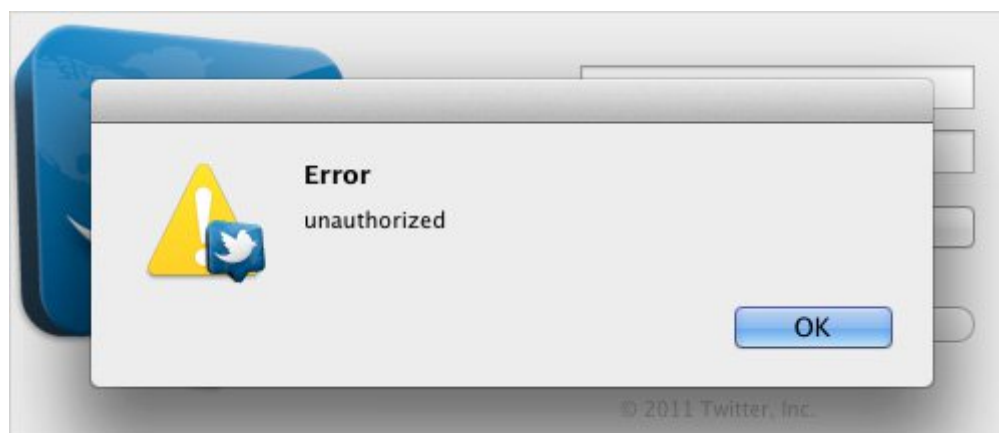
[UXMas has a helpful framework](#) for error messages that they’ve dubbed the 4 H’s.

They say error messages need to be:

1. Human
2. Helpful
3. Humorous
4. Humble

Human

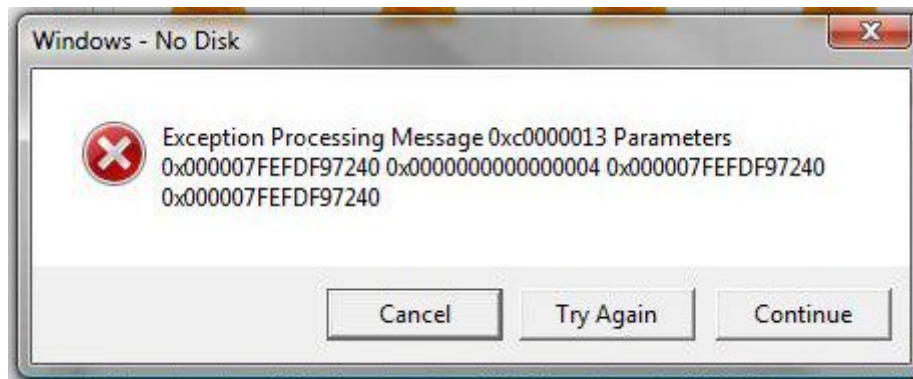
UXMas says the number one rule “is to make sure your error messages sound like they’ve been written for humans.” They give this example as an example of a shitty error message:



[Image Source](#)

Sounds like a robot wrote it.

what does this mean.



[*Image Source*](#)

Helpful

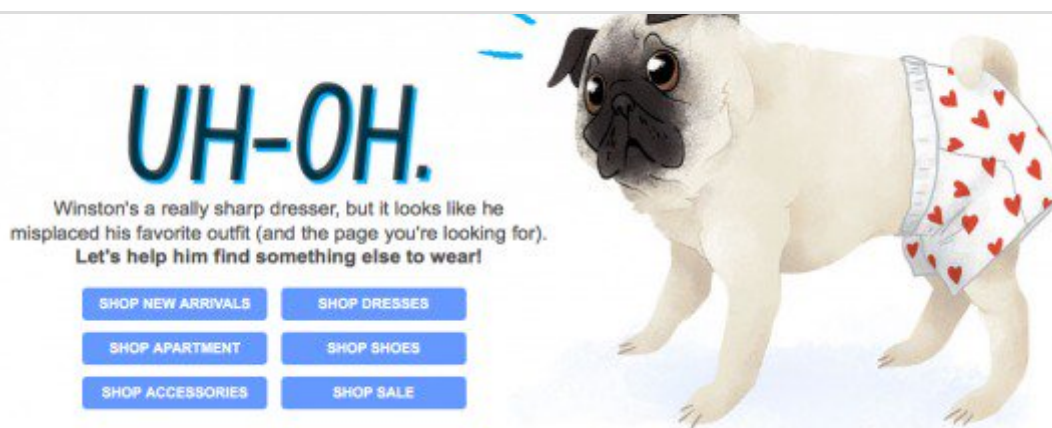
According to UXMas, three factors go into making an error message helpful:

- Is it visible?
- Does it explain clearly what went wrong?
- Does it help the user recover?

We talked about this above. Position your error messages in an intuitive way, make them red and clearly visible. Clearly explain the problem. Offer a helpful solution.

Humorous

UXMas says “keeping your tone light-hearted can help to keep the user on-side—especially if this suits the tone of your brand.” However, I think [humor](#) is contextual with your audience. Might frustrate them more if you’re making light of their errors. Might also work well. I do know that 404 pages are a great place to add some light-hearted humor (and a strategic redirect).



[Image Source](#)

Though Yahoo! has an amazing example of humor in their form validation:

[Image Source](#)

Humble

This one is easy: don't blame the user. We already talked about this above. Take the blame. Apologize and offer a solution.

What About Inline Validation?

Inline validation is a beautiful way to find, alert, and correct errors in real time. Instead of waiting until pressing 'submit' to learn of your errors, you are told right away what went wrong.



Choose your username

Create a password

[Image Source](#)

The research on inline validation is solid. [Luke Wroblewski tested inline validation](#) (in 2009) against a control (after-submit validation). Though the sample was small, they found the following results with the inline version:

- a 22% increase in success rates,
- a 22% decrease in errors made,
- a 31% increase in satisfaction rating,
- a 42% decrease in completion times, and
- a 47% decrease in the number of eye fixations.
- 22% more people making it through your forms is well worth the effort – and so is creating a more satisfying experience for anyone filling out the form.

Not bad. Look into inline validation for your forms. A good example of inline validation online is [booking.com](#):



Primary purpose of your trip:
☒ Leisure ☐ Work

Title **First name** **Last name**
 alex ☒ birkett ☒

Please fill in a valid email address
a@yahoo ☒ *We'll send your confirmation and **travel guide** to Tallinn here!*

Confirm email address

Add a password (optional)
 Don't miss out! Add a password to book faster and reveal Secret Deals

Comfort Double Room
Non-refundable

Guests: 2

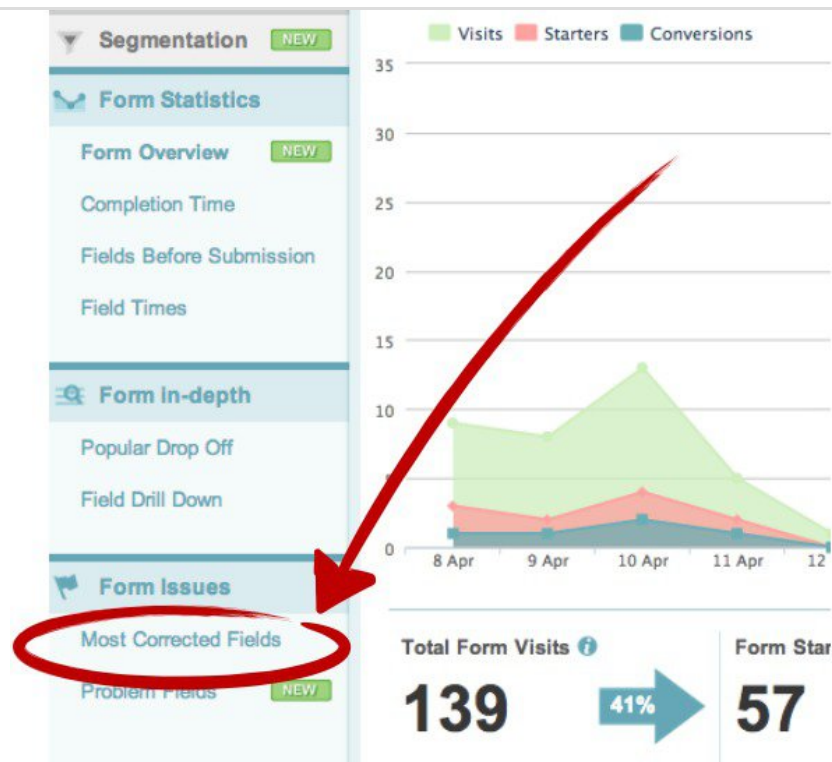
Full Guest Name
alex birkett

☐ **FREE** I want a travel guide to Tallinn!
We'll send you a personalized travel guide with attractions, restaurants and interactive maps.

How To Track Errors

It's nice to implement best practices, but it's even nicer to figure out where people are falling off on your specific form. How do we do that? Well, we have to set up some way to measure form analytics, error messages, abandonments, and completions.

If you're using a tool like [Formisimo](#), it's relatively straightforward, just check out the [Most Corrected Fields report](#):

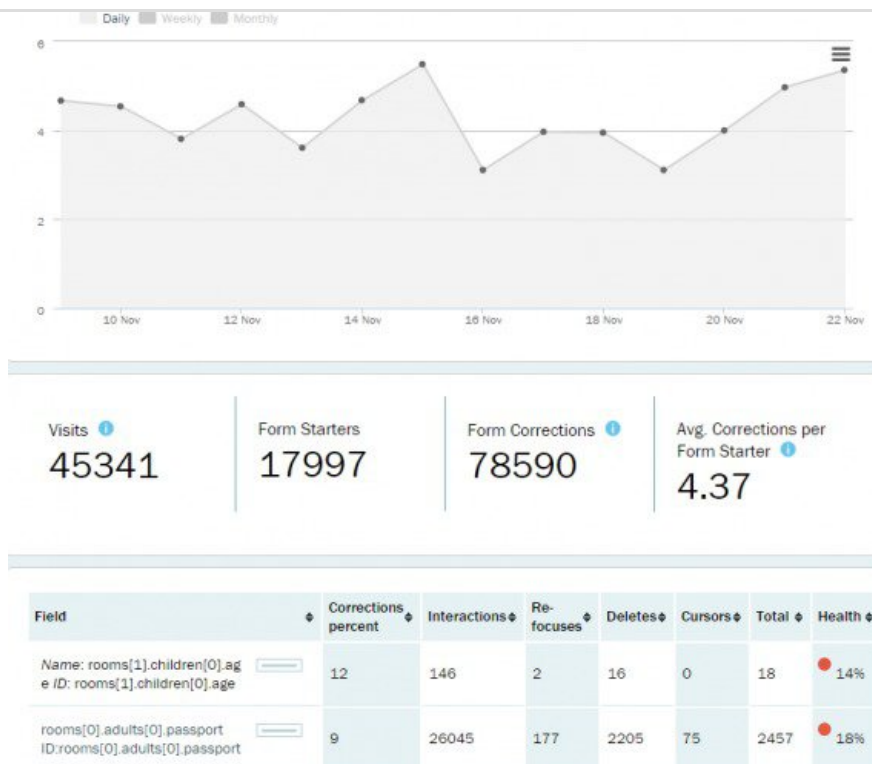


[Image Source](#)

You can see the [average corrections per form starter](#) and use that as a baseline. The goal, of course, is to reduce the number of corrections on a form field (and thereby reduce friction on the form):

BLOG

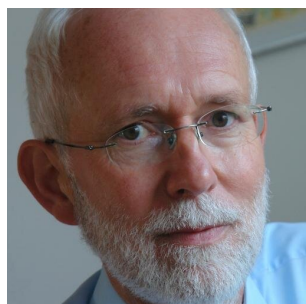
9 Conversion Rate
Optimization
Principles to Get
Y...



[Image Source](#)

How To Track Errors on Google Analytics

[Tim Leighton-Boyce](#) from [CXFocus](#) talked about one of his favorite GA reports on a CXL blog post a while ago:



Tim Leighton-Boyce:

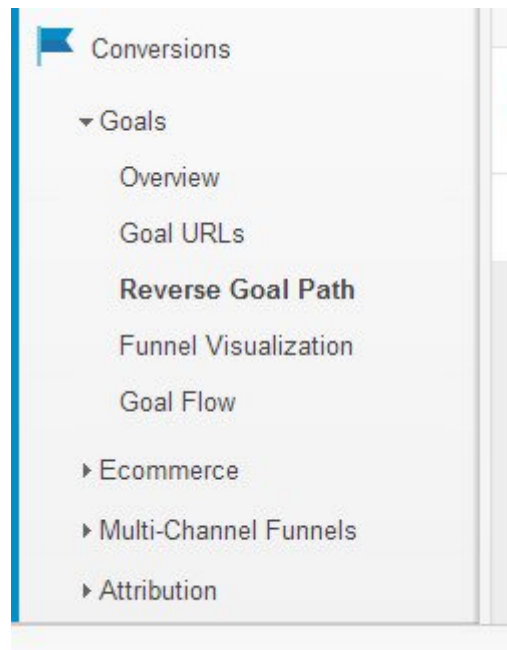
“One of my favourite reports when looking for opportunities is a standard report which most people ignore: the **Conversions > Goals > Reverse Goal Path**.

I use it for error reporting.

This requires being able to configure a goal for errors, which is not always possible on a site. But IF you can set up such a goal then the Reverse Goal Path becomes very powerful.



what the steps leading up to the goal are, unlike a checkout funnel. In fact, the steps which lead up to the goal in this use case are exactly what we're trying to find out.



You can also set up scripts to track JavaScript errors on your page, which you can send to custom events in Google Analytics. [Search Engine Watch explained](#) how to set up custom events in order to track form errors:

” *“Employ a series of custom events on your form with each event representing a field on that form. Your category should define which form is flagging errors; your action should define each form field; and your label can be dynamic, pulling in both a description of the validation rule that triggered the error and the value entered that broke the rule, separated by a pipe (i.e., “|”). This one may require developer assistance.*

Once set up, you can then dive into a custom report that quantifies and stratifies the most critical errors on your forms. At that point, you can assess the root causes of the errors by inspecting the values users are entering. Finally, you should then



number of errors impeding your most important conversion activities.

Conclusion

Designing error messages is all about limited the amount of frustration users feel with your form. If they're too stress – too much cortisol builds up – you risk them giving up to go watch Netflix or something. There are too many better things to do than deal with a crappy, complex, condescending submission form.

So, yes, do usability research yourself, but start with these error message best practices:

- Don't blame the user.
- Write like a human, not a robot.
- Make sure errors are clear, and the messages are positioned in a place that is intuitive.
- Make sure users know how to fix said errors.
- Don't list all errors at the top of the page. Inline validation is a good solution.

Error messages ever frustrate you? Let me know some examples of the worst forms in the comments section.

[Feature image source](#)

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Alex

2 years ago

Awesome post, Alex!

Thank you for sharing. Microsoft is making some progress with their error messages. I like how they added a QR code to their blue screen of death. Makes problem solving a lot easier!



Alex Birkett

2 years ago

Thank you sir! Good to hear there's some improvement from Microsoft in the UX realm.



Pritesh Wani

2 years ago

Very helpful post Alex.



Alex Birkett

2 years ago

Thanks!



Colin Newcomer

2 years ago

For your bitly example – isn't that an intentional decision to not indicate whether the password or username is the incorrect field? I know there's a security debate about it.

E.g. if you tell people the username is correct but the password is wrong, then a malicious actor knows that the username is a valid account. Whereas if you don't say which field is wrong, they can't be sure the username is a valid one, and they can't attempt to brute force or anything.



Alex Birkett

2 years ago

Perhaps – I'm sure that's a valid concern.

Where I think bitly could use improvement is 1) less condescension and more clarity in their error message and 2) clearer follow up actions to fix it. I know it says 'forgot?' on the password field, but that's always there, and what if I had forgotten the username as well?

I think Wells Fargo did it better (again, I'm surprising anything about their UX is commendable). But it's polite, clear, and offers a clear follow up.

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4 Common Mistakes With Error Messages (and How to Fix Them)



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