# **Usability Heuristics for QEESI**

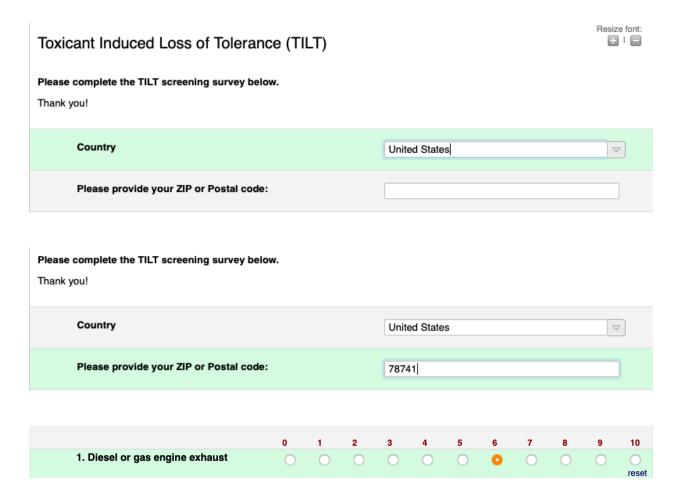


## 1. Visibility of system status

Explanation: What's going on now in the system?

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time. (Read full article on <u>visibility of system status</u>.)

### 1a,1b,1c Good: It indicates the current status using a green background



1d ok: if a score was calculated, there will be a red bar indicating this score is been rated, however, it might look like a warning signal

Total Chemical Intolerance Score (0-100):	60	

## 2. Match between system and the real world

Explanation: use familiar concepts and words for the users in the systems

The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

(Read full article on the match between the system and the real world.)

2a Good: using examples in user's words to explain the symptoms they want to ask

#### **Chemical Exposures**

The following items ask about your responses to various odors or chemical exposures. Please indicate whether or not these odors or exposures would make you feel sick. For example, you get a headache, have difficulty thinking, feel weak, have trouble breathing, get an upset stomach, feel dizzy, or something like that. For any exposure that makes you feel sick, on a 0-10 scale rate the severity of your symptoms with that exposure. For exposures that do not bother you, answer "0." Do not leave any items blank.

For each item, click on one number only: [0 = not at all a problem] [5 = moderate symptoms] [10 = disabling symptoms]

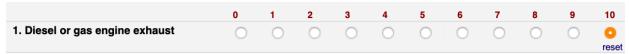
2b Bad: The issue of not having an NA option in the options

## 3. User control and freedom

Explanation: there is an option that provides users to correct mistakes

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

3a Good: they have a reset button for users to click on



3b Good: Users can tailor their view scale



## 4. Consistency and standards

Explanation: use standards if it already exists in other familiar products, or be consistent within the system

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow <u>platform conventions</u>.

4a 4b good: they use two scales, one is 0-10, the other is 0 or 1, to answer different types of questions.



## 4c: inconsistent alignments

#### Other Exposures

The following items ask about your responses to a variety of other exposures. As before, please indicate whether these exposures would make you feel sick. Rate the severity of your symptoms on a 0-10 scale. Do not leave any items blank.

For each item, click on one number only:
[0 = not at all a problem] [5 = moderate symptoms] [10 = disabling symptoms]

#### **Chemical Exposures**

The following items ask about your responses to various odors or chemical exposures. Please indicate whether or not these odors or exposures would make you feel sick. For example, you get a headache, have difficulty thinking, feel weak, have trouble breathing, get an upset stomach, feel dizzy, or something like that. For any exposure that makes you feel sick, on a 0-10 scale rate the severity of your symptoms with that exposure. For exposures that do not bother you, answer "0." Do not leave any items blank.

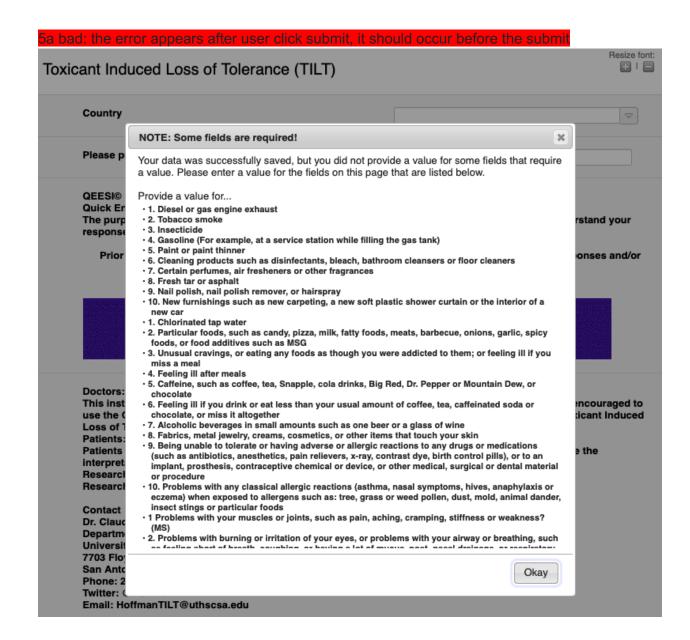
For each item, click on one number only:
[0 = not at all a problem] [5 = moderate symptoms] [10 = disabling symptoms]

4d. Inconsistent background color

Table 1. Criteria for low, medium, and high scale scores							
Low	Medium	High					
0-19	20-39	40-100					
0-19	20-39	40-100					
0-11	12-24	25-100					
0-11	12-23	24-100					
0-3	4-5	6-10					
	Low 0-19 0-19 0-11 0-11	Low Medium 0-19 20-39 0-19 20-39 0-11 12-24 0-11 12-23					

# 5. Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action. (Read full article on <u>preventing user errors</u>.)



# 6. Recognition rather than recall

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate. (Read full article on recognition vs. recall in UX.)

6a ok: the scale number appears on the top when users are selecting the answers.

For each item, click on one number only: [0 = not at all a problem] [5 = moderate symptoms] [10 = disabling symptoms]											
	0	1	2	3	4	5	6	7	8	9	10
1. Diesel or gas engine exhaust	0	0	0	0	0	0	0	0	0	0	reset
2. Tobacco smoke	0	0	0	0	0	0	0	0	0	0	reset
3. Insecticide	0	0	0	0	0	0	0	0	0	0	reset
<ol><li>Gasoline (For example, at a service station while filling the gas tank)</li></ol>	0	0	0	0	0	0	0	0	0	0	reset
5. Paint or paint thinner	0	0	0	0	0	0	0	0	0	0	reset
6. Cleaning products such as disinfectants, bleach, bathroom cleansers or floor cleaners	0	0	0	0	0	0	0	0	0	0	reset
7. Certain perfumes, air fresheners or other fragrances	0	0	0	0	0	0	0	0	0	0	reset
8. Fresh tar or asphalt	0	0	0	0	0	0	0	0	0	0	reset
<ol><li>Nail polish, nail polish remover, or hairspray</li></ol>	0	0	0	0	0	0	0	0	0	0	reset
10. New furnishings such as new carpeting, a new soft plastic shower curtain or the interior of a new car	0	0	0	0	0	0	0	0	0	0	0
Total Chemical Intolerance Score (0-100)	:										reset

# 7. Flexibility and efficiency of use

Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

bad 7a: when hovering on the link, there is no cursor image, it might be difficult for novice user to know it could click on.

Additiona http://fam	ll information on scoring and interpre ilymed.uthscsa.edu/qeesi.pdf	ting theQEESI© can me viewed at
Total Syr	nptom Score (0-100):	

Good 7b: score auto calculation

Total Life Impact Score (0-100):	
Bad 7c: This asks for any additional chemical ex	
example, should the chemical and score be sep better approach may be to have two separate by	
t <mark>he score.</mark>	
Name any additional chemical exposures that make	e you feel ill and score them from 0 to 10:

## 8. Aesthetic and minimalist design

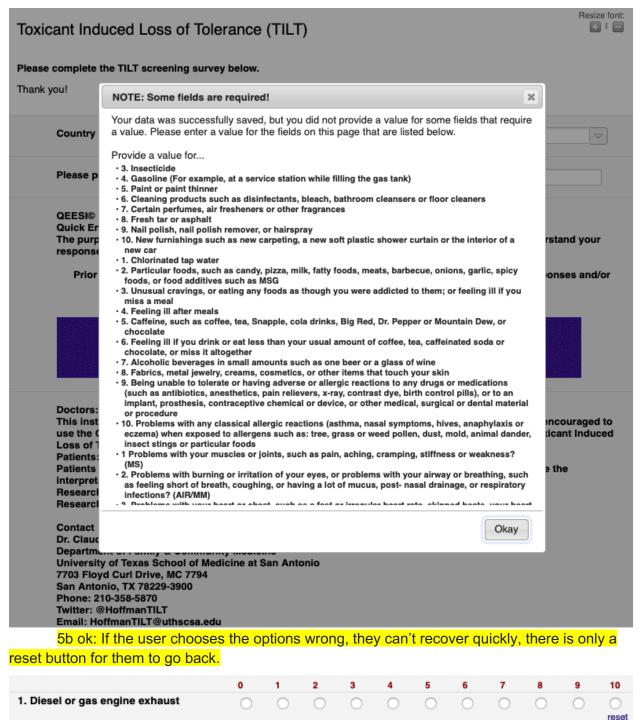
Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

10 1 Problems with your muscles or joints, such as pain, aching, cramping, stiffness or weakness? (MS) reset 2. Problems with burning or irritation of your eyes, or problems with your airway or breathing, such as feeling short of breath, coughing, or having a lot of mucus, post- nasal drainage, or respiratory infections? (AIR/MM) reset 3. Problems with your heart or chest, such as a fast or irregular heart rate, skipped beats, your heart pounding, or chest discomfort? (COR) reset 4. Problems with your stomach or digestive tract, such as abdominal pain or cramping, abdominal swelling or bloating, nausea, diarrhea, or constipation? (GI) reset

# 9. Help users recognize, diagnose, and recover from errors

<u>Error messages</u> should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

9a Ok: If the user misses input fields, there is a list showing all the unlisted items, but it will disappear after the user clicks on "Okay"



## 10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

10a ok: it does a good job on explaining how to interpret the result, as well as providing additional information link to the website, however, it is unclear what "can me view at..." means

#### Interpreting the QEESI®

Information on the development of this instrument, its interpretation, and results for several populations have been published (Miller and Prihoda 1999a,b). Proposed ranges for the QEESI®'s scales and guidelines for their interpretation appear in Tables 1 and 2 below:

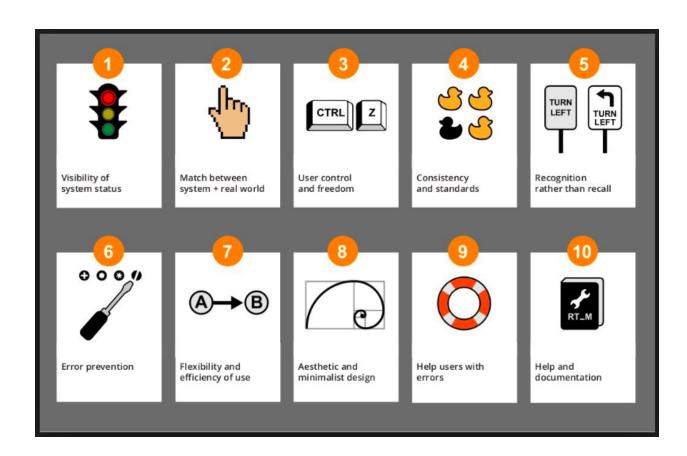
Table 1. Criteria for low, medium, and high scale scores

Scale/Index Score	Low	Medium	High
Symptom Severity	0-19	20-39	40-100
Chemical Intolerance	0-19	20-39	40-100
Other Intolerance	0-11	12-24	25-100
Life Impact	0-11	12-23	24-100
Masking Index	0-3	4-5	6-10

Additional information on scoring and interpreting theQEESI® can me viewed at http://familymed.uthscsa.edu/qeesi.pdf

10b bad: the print instruction is unclear. For the Symptom Star on the last page, it

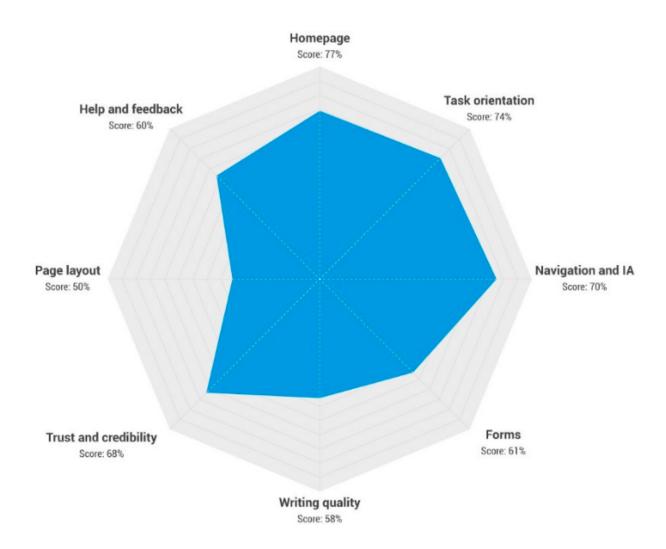
suggests users to print it and to draw on it by themselves. But it doesn't provide an independer form to print. If users print the whole form, it will also print the former pages. If users just print the last page, it doesn't contain the explanation of these abbreviations.

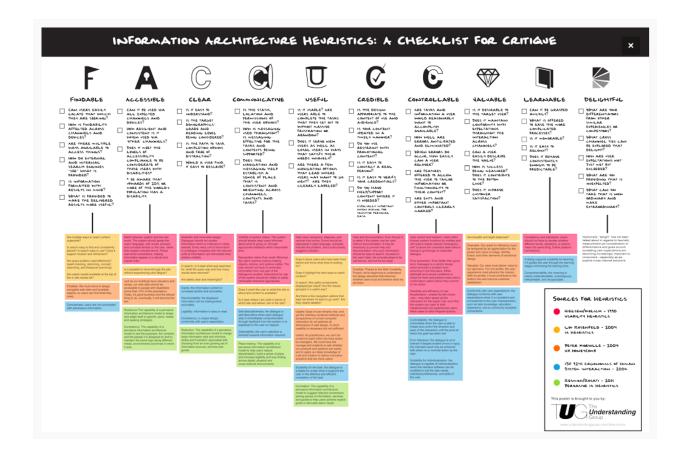


Issue/problem headers.	Heuristic violated	Severity of problem	Recommendation
Lacking column headers.	#1	2	Explicitly describe what the topic for each column is for.
BuzzFeed "reaction icons" can be foreign or unfamiliar to a new users.	#2	3	Description should be given when hovering over icon.
Promoted articles and "Preview" for posts open up in a new tab.	#3	3	While creating a post, the "Preview" should have a popup on current webpage to avoid confusion.
Inconsistency of layouts throughout website.	#4	1	Be consistent and follow the same layout for each webpage.
There is not enough white space on each webpage, it can be overwhelming.	#6	3	Reconsider certain columns to avoid repetition. Also avoid endless scrolling, offer "next" and "back" options.
Search box is not visible, the small icon can be overlooked.	#7	2	Have a larger space for the Search box area.
Overwhelming pressure to share on social media.	#8	3	Remove some social media icons, keep it less repetitive.
Two different comment sections.	#8	3	Have site comments above social media conversations, clearly describe and separate the sections.
Help and contact links not visible on the main page (under "more" section).	#10	2	The endless scrolling should be removed. Add a footer or include important help/contact links at the very top of the page. Make sure it is in a visible and appropriate section of the site.

# **Collect and Analyze Results**

This is simply a roundup of all the evaluators' comments into a single report. This report can be marked with severity ratings, if you desire, to enable rapid deployment of resources to fix the problems identified.





## Peidi's feedback:

1. I found this form in Scoring the QEESI part. I can choose the textbox, but I cannot type anything. I don't know what's this for.

Prior to activating the "SUBMIT" button at he end of the survey Please consider saving your responses and/or making a printout of your responses using your browser options.				
HEAD = Head-related symptoms				
COG = Cognitive symptoms				
AFF = Affective symptoms				

- 2. For the Symptom Star on the last page, it suggests users to print it and to draw on it by themselves. But it doesn't provide an independent form to print. If users print the whole form, it will also print the former pages. If users just print the last page, it doesn't contain the explanation of these abbreviations.
- 3. We can also consider evaluation of the QUSSEI website, can users quickly understand that and find what they want? How the website, BRSSEI, QUSSEI linked with each other functionally and formatly.

#### Kramer's Feedback

 This asks for any additional chemical exposures but it unclear how to write it. For example, should the chemical and score be separated by a comma, period, or space? A better approach may be to have two separate boxes. One for the chemical and one for the score.

Ν	ame any additional chemical exposures that make you feel ill and score them from 0 to 10.	
	none	
		/
		**

2. The issue of not having an NA option