UX? What about TX for Test Automation?

Isabel Evans fbcs citp
ie@isabelevans.uk
www.isabelevans.uk
Three key points

• Test automation requires consideration of the UX for the tool and the tests;
• People who use automation might not always be technical but they are always human;
• UX-D and UX-T for test automation supports improved decision making and quality.
“Test automation requires consideration of the UX for the tool and the tests”

What is UX?
User eXperience
UX-D (Design) and UX-T (Testing)
Be happy - do good - leave the world a better place than you found it

Isabel Evans

Making life better - example Cyclist’s UX
Maturity

We do UX defect prevention

We know why we do not have UX problems

We are identifying and resolving UX problems so our users don’t experience them

A: Uncertainty

B: Awakening

C: Enlightenment

D: Wisdom

E: Certainty

Do they always have to have a problem?

Why are our users having a problem?

It’s the stupid users!
“X: Ignorance – “We don’t have problems with usability” Usability is not discussed as an issue.
A: Uncertainty – “We don’t know why we have problems with usability” User-Centred processes are not implemented, or fail to achieve their purpose.
B: Awakening – “Is it absolutely necessary to always have problems with usability?” User-Centred processes are implemented but are performed by inappropriate staff using sub-optimal methods.
C: Enlightenment – “Through management commitment and improvement of human centred processes we are identifying and resolving our problems” User-Centred processes are implemented and produce results, but these results do not always give the expected benefits to the software development process.
D: Wisdom – “Usability defect prevention is a routine part of our operation” User-Centred processes are integrated into the software lifecycle and used to improve all work products.
E: Certainty – “We know why we do not have problems with usability” The culture of the organisation is user-centred.

The experience of the INUSE and RESPECT projects is that much of European industry is at level 1, 2 or sometimes 3 on this scale.”

Journal of System and Software, 1999 (in press) **Quality in Use: Meeting User Needs for Quality** Nigel Bevan Serco Usability Services
This is the shape of the presentation:

- We are following a UX method
- Generic examples
  - A user of Apple computers
  - A hospital consultant
  - An IT service desk support person
- Specific test automation example
“People who use automation might not always be technical but they are always human”

Who are these people?

Ordinary people
Technical people
Generic Example Personas (people with emotions)

Apple Lover “It was so beautiful I wanted to marry it
And then it lost my calendar entries and emails”

Consultant Doctor “This is the clunkiest piece of technology I have ever had to use;
I will have to ask my secretary to print your test results”
Generic Example Personas  
(ppeople working with technology)

Moving IT Service Management to the 21st century

“Ethnographic research paints a sad picture of the current state of the ITSM market.

...vision is to build a solution designed for humans, not processes.”

Technical People on software projects

Why would I want to use a tool called Github?

Too many geeks are making Automation Script piles for other geeks, and [calling it] a tool!

it is like working with something designed to be used by a 12-year-old boy in his bedroom in the 1980’s

a lack of consideration for how people work and think ... basically it’s still the mindset that the human adapts to the computer, not vice-versa
“Programming is so hard that only highly talented, trained, and dedicated individuals can do it passably well. The inescapable conclusion is that programming as we know it is just unnatural for humans. The solution is to **reinvent programming to suit human cognitive skills** to program the way we think. This is a matter of usability. The sad fact is that modern programming languages are usability disasters, full of design mistakes inherited from earlier eras.”

http://alarmingdevelopment.org/
Developers Liberation Front
Software developers are often able to do more with a small subset of available tools, and those that a developer might use are often not fully leveraged. We believe that the solution to this problem can be found by rethinking the design of software development tools based on a better understanding of why developers use and do not use these tools.

https://www.youtube.com/watch?v=oQ455i1aCQI
http://research.csc.ncsu.edu/dlf/
Developers Liberation Front

Software developers only use a small subset of the available tools, and those that a developer does use are often not fully leveraged.

“We believe that the solution to this problem can be found by rethinking the design of software development tools based on a better understanding of why developers use and do not use these tools.”
“UXD and UXT for test automation supports improved decision making and quality”

What decisions?

Trivial decisions
Life-changing decisions
Software Dev / Test Tool users?

The test tool marked all the tests as passed except 1, but in fact none of the tests marked “passed” had actually run...

so now I wanna know why raising a string exception is bad. Like what should I be doing instead? Since it thinks it’s a problem. And so none of these [messages] really help me

I spend 50% of my time wrestling with the technology instead of solving the problem I am working on

a lack of consideration for how people work and think ... basically it’s still the mindset that the human adapts to the computer, not vice-versa
I need to know... NOW! ...AGAIN! ...AGAIN!

Why haven’t we released yet and what are the risks?

What did I do wrong and what do I change?

What step do I take next?

How much longer will this take?
“What about TX for Test Automation?”

Yeah, but how?

TX = Tester eXperience
Start to think TX

- Identify WHO uses your tool
- Identify WHY they use it
- Identify WHAT they want to do
- Identify their EMOTIONS and EMPATHISE!
- Score the UX, Quality in Use (QiU) and Internal Quality (IQ) attributes
- Write RICH STORIES
- Do a USABILITY REVIEW
TX: Who? Why?

- Developer
- Test engineer
- User tester
- Test manager
- Product owner
- Automation specialist
- Domain specialist + who?

Who? Why? WHAT
- Automation user?

UX, QiU, IQ
- RICH STORIES
- USABILITY REVIEW
TX: What tasks?

- fault reports
- checking results
- running tests
- assessing risk
- checking completion
- building tests
- Other tasks...
- Automation user?

WHO
WHY
WHAT
EMOTIONS
UX, QiU, IQ
RICH STORIES
USABILITY REVIEW
Images with range of emotions
TX: Which attributes? (ISO 25000 series)

- Functionality
  - Performance
  - Security
  - Maintainability
  - Interoperability
  - Portability
  - Compatibility

- Usability
  - Flexibility
  - Safety
  - Accessibility

- Internal quality

- Quality in Use

- valuable, useful, credible, findable, usable, accessible, meaningful, flowing, playful, immersive, seductive, pleasurable, desirable, etc.

- UX-D

WHO
WHY
WHAT
EMOTIONS
UX, Qiu, IQ
RICH STORIES
USABILITY REVIEW
Attributes Generically: Different people have different needs

Quality attribute expectations compared

--- hospital consultant

--- Apple lover

- effectiveness
- credibility
- efficiency
- flow
- conformity
- excitement
- extendability
- desirability
Attributes Generically:
Different people have different needs

- Effectiveness
- Credibility
- Flow
- Extendibility
- Conformity
- Satisfaction
- Efficiency
Attributes: Different automation users have different needs

- test manager
- automation specialist
- senior stakeholder

Effectiveness

Flow

Desirability

Health & Safety

Commercial

Accessibility

Efficiency

Satisfaction

Conformity

Extendibility
User Stories...

As a wookie,
I want to rrrraaaaawwwrr
so I can rrwwwwwwaaarrggggghhh.

https://twitter.com/jediuserstories
User Stories...

@gojkoadzic user story format and some words of wisdom from an agile Australia conference

As a software developer I’m doing it wrong because I think this template is a replacement for talking to people

@sammy_lee12  Oct 10
Rich User Stories Generic Example 1

Apple lover

“As a non-technical person
I want to transfer to the latest gadgets and software
without being tied to one source
Without losing my calendar entries and emails
Because otherwise I am sad and frustrated”
Rich User Stories Example 2
Hospital Consultant

“As a consultant doctor
I want to concentrate on treating my patients
and communicating well with them
I don’t want to be blocked by the software
Because otherwise my patients and I become frustrated and are subjected to unnecessary worry”
As a service desk worker
I want to use software that supports the flow of my work
And treats me like a human being
And allows me to support my customers without frustration
So that they and I can converse calmly and trust issue resolutions
Test automation user: Rich User Story

As a domain specialist tester
I want to use software dev/test tools that provide me with information in my domain language
That don’t force me to engage with technical issues
That provide information for the developers that they & I can trust
And don’t make me feel stupid
So that we make decisions we both trust without interrupting our flow of work.

Functional Suitability
Usability
Effectiveness
Conformance
Flow, credibility, trust
Check your tools interfaces today...
Easy usability testing - Heuristic Evaluation

Visibility of system status
Match between system and the real world
User control and freedom
Consistency and standards
Error prevention
Recognition rather than recall
Flexibility and efficiency of use
Aesthetic and minimalist design
Help users recognize, diagnose, and recover from errors
Help and documentation

https://www.nngroup.com/articles/ten-usability-heuristics/
“What about TX for Test Automation?”

And what are you doing, Isabel?
Tester eXperience Workbox Project

R&D
Awareness
Guidelines
Analytics
Prototyping
Meta-tool?

You?

You?
“What about TX for Test Automation?”

And what could you do, UCAAT conference and ETSI?
ETSİ (conference handout)

“... ETSİ’s aim has always been to produce documents that are easy to understand and easy to use...”
Email me feedback on my blogposts

Links to blog and contact form on www.isabelevans.uk

- Why we need a better experience of software

- Why we need a better toolset

- A vision for the future
What do you test with?

Head
What do you test with, when you test UX and think TX?

- Head
- Heart
- Gut
- Soul
Three key points

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• UX-D and UX-T for test automation supports improved decision making and quality.
References

• “The test tool marked all the tests as passed except 1, but in fact none of the tests marked “passed” had actually run” Quote from Fewster and Graham “Experiences of Test Automation”
• Quotes from attendees at the WII briefing meeting: “I spend 50% of my time wrestling with the technology instead of solving the problem I am working on” and “it is like working with something designed to be used by a 12-year-old boy in his bedroom in the 1980’s”. “Why would I want to use a tool called Github?”
• Gender and other bias in IT tools, for example in tool default behaviour, use of language, voice recognition, gendering of support tools, is increasingly being studied and remarked on e.g. http://huff.to/1I5pek4, http://bit.ly/1MXNTpF, http://bit.ly/2bfI5LY.
• Problems with customer support tools: “Ethnographic research paints a sad picture of the current state of the ITSM market. ...vision is to build a solution designed for humans, not processes” [http://blogs.ca.com/2016/01/27/moving-itservice-management-to-the-21st-century/]
• Evidence that tools do not work for IT people “...a lack of consideration for how people work and think ... basically it’s still the mindset that the human adapts to the computer, not vice-versa.” (A Taxonomy of Tool-Related Issues Affecting the Adoption of Model-Driven Engineering by Whittle, Hutchinson, Rouncefield, Burden and Heldal)
• Evidence that developers do not find tools easy to use: “...so now I wanna know why raising a string exception is bad. Like what should I be doing instead? Since it thinks it’s a problem. And so none of these really help me...” (Why Don’t Software Developers Use Static Analysis Tools to Find Bugs? By Johnson, Song, and Murphy-Hill).
• ISO 25000 Series of standards (quality in use attributes)
  • http://alarmingdevelopment.org/
  • https://www.youtube.com/watch?v=oQ455i1aCQI
  • https://www.nngroup.com/articles/ten-usability-heuristics/
  • http://research.csc.ncsu.edu/dlf/
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