Title, abstract and biography

Lloyd Roden
Top Testing Challenges we face today
Najaarsevent TestNet: 22 september 2009

Abstract

The study of human behaviour is a fascinating and very complex subject. Our emotions make up a huge part of our personalities and when we are presented with a challenging situation each of us will react in a very different way. There can be some challenges that provoke a good reaction whilst others may provoke a negative reaction.
My current top testing challenges in testing or IT today
• Using the resources we have in this economic climate
• There is no such thing as “Best Practice”
• Estimating testing is performed wrongly
• We lie with metrics
• Challenge complexity at every opportunity
• Test Managers should test
How to apply this in our workplace
It is my hope that you would be challenged in your thinking in at least one of these areas. How can we make a difference and change other people’s mindsets? During this session I shall provide some tips for implementing changes and also a personal action plan.

Biography

Lloyd has been involved in the software industry since 1980, studying computer science at Leicester University. He joined Pearl Assurance as a programmer in 1983 and worked there for five years before becoming a Senior Independent Test Analyst for Royal Life. Three years later he joined Peterborough Software where he became project manager for the Product Assurance department. He also set up and managed the Independent Test Unit for nearly 3 years. During his 8 years at Peterborough Software he worked through key issues in test management such as; testing to pre-defined deadlines, managing a test team, successfully implementing and using test automation tools and building quality into the testing process. He joined Grove Consultants in April 1999.
Lloyd was chairman of the QARun User Group for three years, and is a lively and enthusiastic speaker at conferences and seminars. He has been a keynote speaker at EuroSTAR, AsiaSTAR, STAREast and STARWest and he has also spoken at SQE Automation, Test Congress and Unicom conferences as well as Special Interest Groups in Software Testing in a variety of different countries. Lloyd, together with the other members of Grove Consultants, jointly chaired the first SQE Test Automation Conference in 2001.
Lloyd has been Programme Chair for both the tenth and eleventh EuroSTAR conferences. He won the EuroSTAR Software Testing Excellence Award in 2004 in Cologne.
At Grove Consultants, he provides consultancy and training in all aspects of testing, specialising in test management, people issues in testing and test automation.

Top Challenges (or opportunities) in Testing Today

By
Lloyd Roden

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What is a challenge?

- Climbing Mount Everest?
- Running a marathon?
- Cooking a dinner party for 20 people?
- Flying?
- Getting out of bed in the morning?

Content

How we react to challenges

My top challenges in testing today

How to make a difference

Good versus Bad Challenges

bad challenges

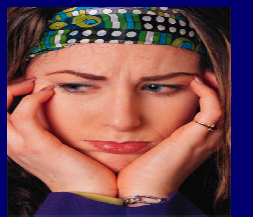
- when they are harmful
- when they have undesirable consequences

good challenges

- when they improve yourself
- when they open your mind to other things

How we react…

?



Challenge #1: ban the use of "best practice"

Best: the highest quality, excellence or standing. Absolute qualifier, context independent

Practice: habitual or customary performance

THEREFORE:

Best Practice: the highest quality of habitual performance with no context!

so why do we actively promote "best practice in any lifecycle"?

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Why "best practice" can be harmful

Dreyfus Model (for skills acquisition):

NOVICE
(needs practices)

ADVANCED BEGINNER
(uses practices)

COMPETENT
(defined practices)

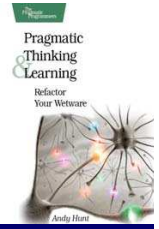
most people stop here

contextual awareness

PROFICIENT
(falls back on practices)

behavior from instinct

EXPERT
(subverts practices)



So how does this help?

where are “best practices” useful?

- protecting people from themselves
- helping advanced beginners
- providing work for competent people ☺

however if “best practices” are used it will…

- stifle the creative environment
- frustrate your best people

suggestion: challenge any references to “Best Practices” replace with good practices and know when and when not to use them

inspired by Dan North, Øredev conference

So how do we estimate and monitor quality?

demo

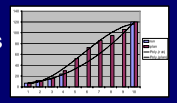
using estimation iterations utilities…

- bugs available to find in next iteration
  = bugs – bugs fixed + new bugs + nested bugs
  (bugs* fix rate) + (bugs fixed * insert rate) + (bugs * nesting rate)

bugs	fix_rate	insert_rate	nested_rate	bugs_left
12	80%	20%	10%	5
5	80%	20%	5%	2
2	80%	20%	0%	0

no. iterations: 4

…and S-curve graphs



demo

suggestion: for every test estimate you give – provide an estimate for the quality you are to expect and then monitor this quality

Challenge #2: Estimate Quality…and monitor

WARNING: be careful of Brook’s law – 9 women cannot have a baby in 1 month! Some activities cannot be accelerated by adding more resource

one of the problems we have with test estimation is that it is wrongly performed….

fact: estimation is based on 2 aspects

effort + people = schedule

half truth for testing:

effort + people + quality = schedule

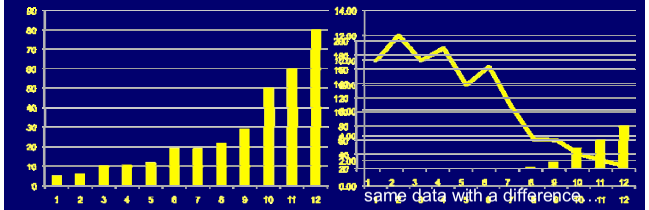
we must also estimate the number % severity of the bugs we are going to find to make our estimates meaningful (a direct correlation)

…once we have estimated quality – we must monitor quality!

Challenge #3: Don’t lie with metrics

…but I am sure not intentionally let us look at some graphs…

but what if we look at the data differently…how much effort is expended in finding the bugs?



same data with a difference…

number of bugs is increasing?

Lies, damned lies and statistics

what about test effectiveness after 1 month of live

Project 1: DDP = 85%	850	150
Project 2 : DDP = 60%	60	40
Project 3 : DDP = 99.9%	999	1
Project 4 : DDP = 10%	1	9

conclusion: reward team 3, punish team 4?

why don't we have a look at the numbers

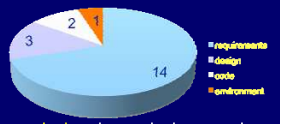
and what about test cases?

what is a test case?

(analogy of a case is a good one!)

counting them can be meaningless…

conclusion: requirements are bad



conclusion: inconclusive, numbers are not significant

suggestion: metrics we produce MUST be significant. Use basic statistics to verify your numbers

Look at the problem with counting test cases…

Public Course Booking Form - Please Complete All Fields

Please read our booking conditions

Public course dates

Course

Date

Contact Information for the person making the booking

Title

First Name

Last Name

Email

Telephone

Invoice Details

Company Name

Company Address

Purchase Order needed for invoice?

Yes No

Continue

what is a test case in this example?

Challenge # 4: Using the resource we have

THE BAD NEWS:

the economic climate is affecting us all…it is truly global

- financial sector, construction industry, car manufacturers, energy, cell phones, consultancy etc etc.
- all parts of the world are affected
- budgets are at best "tight"
- so what can be done?...

The good news

- yourself and your team
  - establish what strengths you have (psychometric tests)
  - provide some "slack"…higher morale and productivity
- negotiate and be honest with vendors
  - be open about what budgets you have for tools, training and consultancy.
  - honesty is imperative
- cheap and free tools
  - wealth of tools, utilities that are free and/or open-source

suggestion: ascertain what resource you do have…people, hardware, tools, budgets etc and prioritize what is most important. Negotiate with vendors for the best deal…it is a "buyers market"

Challenge # 5: Challenge complexity at every opportunity

- simplicity seen as weak and uninteresting
  - who wants a "basic mobile phone?"
- complex is seen as good
  - I don't understand this, so it must be really good (everyone else understands)
  - $1m

suggestion: challenge requirements and design documents at every opportunity to see whether complexity is needed

Challenge # 6: Test Managers/Leads should test

…and testers should improve their technical skills
some excuses that have been given to me…

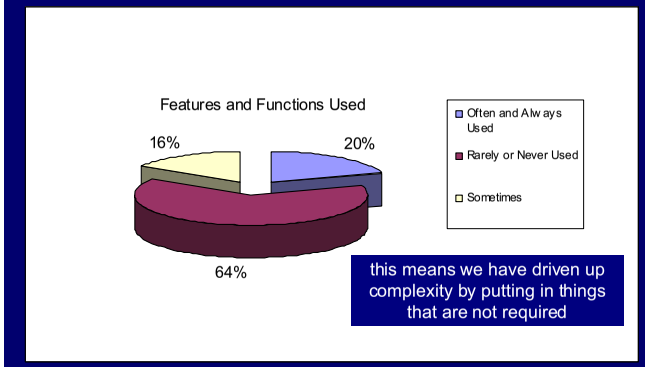
"I can't perform testing as I don't know the application"

"I don't have time to perform testing, I have meetings to attend, reports to write, schedules to monitor…"

"I have 32 testers reporting to me, you are not seriously suggesting that I test as well?

"I have done testing in the past, I have now moved on. I have my team who do it much better"

Features and functions used



this means we have driven up complexity by putting in things that are not required

Jim Johnson XP2002 Standish Study Group

Why is this non-negotiable?

why do I believe Test Managers/Leads should test:

- you can identify & empathize with the team's frustrations
- you can lead by example
  - assist when more testing is required
  - avoid the "wool" being pulled
- you will improve your estimation skills
- you will gain credibility and trust within the organization

suggestion: adopt Friday afternoon Exploratory Testing/Bug hunting afternoons which includes the Test Lead/Manager

Top Challenges in Testing © Grove Consultants

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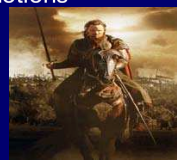
What to do now…

- produce an action plan
  - which of these challenges are affecting you?
  - what other challenges are you facing?
  - produce a series of steps to take
- discuss these with your manager/team
  - this can be the hardest part!
- recognise that challenges will stir emotions
  - but don't give up!
  - choose your battles



Summary: Key Points

we need to understand how humans react to challenges and the importance of facing them to shape our personality, character and understanding

my top challenges…they are not exhaustive by any means

the step we now take is important to make a difference in our workplaces