

Seven Deadly Sins of Testing

Pitfalls on the Path to Software Quality



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Introduction

- ⊕ Have you seen a smart, otherwise-capable tester or test team sabotage themselves?
- ⊕ It does happen, often through one or more of the following
 - ⊕ Irrelevance/redundancy
 - ⊕ Ignorance of relevant skills or facts
 - ⊕ Obstructionism
 - ⊕ Adversarialism
 - ⊕ Nit-picking
 - ⊕ Blindness to project/organizational priorities
 - ⊕ Last-moment-ism
- ⊕ What are these seven deadly sins, how can they be stopped, and how can the problems be solved?
- ⊕ Let's take a look...



Irrelevance or Redundancy

- ❖ Testing what doesn't matter or repeating tests already run by others
- ❖ How to avoid this
 - ❖ Use smart test selection strategies (e.g., risk-based testing)
 - ❖ Understand what others are testing (e.g., unit tests, in some cases UAT)
- ❖ When test teams have made this mistake in the past, close coordination with other test stakeholders is important to show progress



Irrelevance Case Study

- ❖ One test team (mine) focused on automating combinations of OS/DBMS
- ❖ Meanwhile, important installation and usability bugs escaped
- ❖ Heavy focus on automated accuracy testing was seen as irrelevant to higher quality
- ❖ We had to add additional manual tests to cover these other areas
- ❖ The reputational damage proved very difficult to undo



Ignorance of Relevant Skills or Facts

- ✦ Lack of technical, testing, or application skills
- ✦ Lack of awareness of organizational or user context
- ✦ Test managers should
 - ✦ Use task analysis to identify critical skills
 - ✦ Create and execute a test team development plan
 - ✦ Become well-connected with other stakeholders
- ✦ If your team's been guilty of this sin, be sure to market the strides you're taking to improve skills and awareness



Ignorance Case Study

- ✦ Many people working as testers don't know what an equivalence partition is
- ✦ Even fewer know sophisticated test design techniques
- ✦ Proponents of ignorance increase the trouble in our profession
 - ✦ Beliefs that anyone can test
 - ✦ Opposition to structured training
 - ✦ “Schools of Testing” concept creates barriers to discourse and exchange of ideas
- ✦ Fortunately, the ISTQB program is changing this situation



Obstructionism

- ⊕ Getting in the way rather than helping
 - ⊞ Insisting on rigid adherence to entry or exit criteria when conditions have changed
 - ⊞ Persisting with the exaggeration of obstacles
 - ⊞ Refusing to adapt to changing needs or situations (e.g., Agile methods, test automation, etc.)
- ⊕ If the root cause is a misunderstanding of the role of testing (e.g., “process cop”), clarify the test team’s role
- ⊕ If the root cause is a contrary personality, then it’s harder to solve and might require personnel changes
- ⊕ A history of obstruction can create a harmful reputation that requires time and effort to repair



Obstructionism Case Study

- ❖ One tester was relentlessly negative
 - ❖ Product quality bad
 - ❖ Management team incompetent
 - ❖ Developers stupid
- ❖ This tester was very good as a tester, and as a test lead
- ❖ However, his attitude limited his ability to rise above those roles
- ❖ While respected by fellow testers, he had problematic relations with non-test staff
- ❖ As a contractor, this attitude inhibited his ability to get work



Adversarialism

- ❖ Deciding (or being told) that testing is about enforcement of process or quality, and assuming an adversarial role (esp. with development)
- ❖ Adversarialism can be resolved through careful clarification of the proper test role, mission, and objectives with stakeholders and managers
- ❖ Bad feelings and grudges can persist for months or even years afterward



Adversarialism Case Study

- ❖ Test team implemented and enforced rigid process on all other teams
- ❖ Worst practices in tool selection process were used, resulting in a hated tool
- ❖ This was done at CIO direction, but without political cover
- ❖ A poisonous relationship developed
- ❖ Ultimately the test team was disbanded and all testing work outsourced



Nit-picking

- ⊕ Inflating the criticality of defects or reporting trivial defects, especially if important defects are escaping
- ⊕ Solutions include:
 - ⊞ Fixing the bug triage process so it's not a poker game
 - ⊞ Ensuring uniform understanding of priority and severity ratings across all project participants
 - ⊞ Identifying “repeat inflaters” and fixing their attitude
 - ⊞ Eliminating any sort of ego-identification (“my bugs”)
- ⊕ Once corrected, the problems associated with this can go away, but credibility takes time to regain



Nit-picking Case Study

- ❖ Numerous testers have told me they inflate bug reports to ensure more of them get fixed
- ❖ In assessments, when I hear that, I often hear from programmers that they ignore tester ratings
- ❖ In some cases, just a few examples of inflated bug reports suffice to tar the reputation of the entire team
- ❖ While this tactic can work at first for individual bugs, I've never seen it work in the longer term



Blindness to Priorities

- ❖ Lack of awareness of what is critical for project or organizational success
- ❖ Can include deflating defect importance or avoiding tests due to individual sensitivities
- ❖ If the cause is an excessively isolated test team, build stronger relationships with stakeholders
- ❖ If the cause is siloing, work with your manager to open better communication channels
- ❖ While this can lead to serious mistakes, the symptoms go away quickly once the problem is solved



Priority Blindness Case Study

- ❖ One organization found itself under severe financial constraints during a project
- ❖ Developers were kept
- ❖ Half the testers were let go
- ❖ Test manager was unable to explain the value of testing in terms that related to organizational priorities
- ❖ When testers and test managers don't understand objectives and priorities, or can't demonstrate achievement of them, success is unlikely



Last-moment-ism

- ✦ Finding important bugs right at the end of a test execution period
- ✦ If due to improper sequencing of tests, institute risk-based testing (which you should anyway)
- ✦ If due to broken risk-based testing, fix what's broken (e.g., missing stakeholders, rating inflation, etc.)
- ✦ If due to late reactive testing, integrate reactive testing throughout test execution
- ✦ It usually takes a couple projects before this problem can be completely resolved



Last-moment-ism Case Study

- ✦ On one project, testers continued to find major problems late in test execution
- ✦ Many of these problems could have been found earlier
- ✦ Risk was not used to sequence tests or allocate test effort
- ✦ Programmers and project managers were unhappy last-moment surprises
- ✦ The testing service provider was not brought back for the next project



Conclusions

- ❖ Testers and test managers sometimes make simple mistakes that cause big problems
- ❖ Recognize the seven deadly sins of testing so you can resolve them
- ❖ Don't assume the damage is over when the sinning is done
- ❖ Marketing the successful resolution of these problems is often critical



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