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 than 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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