Lessons Learned from Conducting Industry Surveys in Software Testing

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Outline

- Motivation
- Overview of our Empirical Studies
- Key lessons learned
- Some recommendations for others

Motivation

- Who makes a good software tester?
- How do testing teams form, evolve?
- What personality characteristics impact software testing performance?
- What do testers do?
- How can we best assess testers?
- Do tester personalities differ significantly in any way from other IT professionals?

Studies with Industry

- Survey 1: Factors Influencing Software Tester Performance (Moderately detailed survey)
- Survey 2: Worklog Collection of Software Testers (Multi-week data collection)
- Survey 3: Testing Manager Opinion on a New Performance Appraisal Form for Software Testers (Initially very detailed survey, modified to light – weight due to poor response rate)
- Survey 4: Survey of Personality of Software Testers and Related IT Professionals (Light-weight survey)

Key Lessons Learned

- Participant recruitment – how, who
- Response rate – how to improve
- Invitations – big vs small
- Collecting consents – paper vs electronic
- Size of questionnaire
- Nature of participation & motivation
- Data analysis
- Ethical approvals
- Data security (esp for web-based data collection)

Recommendations

- Group invitations are helpful - moderators need convincing of the worth
- Straightforward questionnaires are more popular than surveys requiring more time to form responses
- Marketing is important to get participants
- Simple methods for participants to indicate informed consent are helpful
- Design surveys with different data analysis methods in mind
- Plan for time-consuming Ethics approval
- Ensuring data security critical