Challenges Faced by Agile Testers: A Case Study

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Research Contribution

- Goal Identify the challenges faced by agile testers in geographically distributed teams at service organizations.
- Identified 15 challenges and solution for those challenges.
- Challenges categorized into following groups;
 - Time management (4)
 - Lack of awareness (2)
 - Scrum principle violations (6)
 - Team collaboration (3)

- Being an Agile Tester(AT) is more challenging compared to Quality Assurance (QA) professionals in the plan-driven process.
- T.D. Hellmann and team has proposed only a proof of concept (POC) solution and did not validate or further investigate the solution.
 - Related work does not capture the specific challenges faced by the ATs and the best practices to follow in service delivery organizations.

What are the challenges faced by agile testers in geographically distributed teams at service organizations?



Research methodology



Captures during the agile tester forum

Research Objective and Findings

- Research objectives
 - Identify the challenges faced by agile testers in geographically distributed teams at service organizations.
 - Identify solutions for the challenges identified.

Demographic data analysis



Age Distribution



- Female percentage is high in QA practice.
- Most of the respondents play senior and lead role in projects.
- Scrum framework is the mostly used agile practice within the organization.
- Almost all the respondents are in between 20-40 age.

Frequency of backlog grooming ceremony conduct in the project

- 24% Of respondents mentioned that backlog grooming ceremony is not conducting as per the agreed frequency.
- Only 33% respondents mentioned that they are not accepting the changes within the sprint.

Changes are not accepted within the

sprint

94% respondents are aware about project critical success factors, project delivery timeline, complexity, and criticality of the business.

87% of respondents agree that they are using user friendly, transparent tools to track and manage the project.

Agile team members are competent enough and they are very collaborative.

All respondents agreed software Metrics brings value to agile projects.

Team track metrics based on effort, such as Defect rate, Defect slippage rate.

Test design productivity, test execution productivity, test execution progress, and test execution rate are used to measure testing efficiency.

Some metrics focus on defects captured in the sprint, such as Defect removal efficiency, Defect to remark ratio, and Open defect aging.

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#	Solutions – Time Management
1	 a. Introduce pair programming. b. Automate the sprint n-1. c. Start to build the automation component and run only after code stability achieved. d. Cover unit testing by QA test on developer environment.
2	 a. Write test cases to align the business flow. (re-usable business component model.) b. Automate only the journey's which are not changing frequently. c. Manage data in spreadsheets, where changes can have made at one time. d. Automation conduct only for stable environment.
3	 a. Automation team follows the same structure used by manual testers. b. Maintain catalog with changes made to manual test cases.
4	a. End-to-end deployment of services in a fully automated environment provisioning process.

#	Solutions – Lack of Awareness
5	 a. Conduct knowledge transferring sessions on metrics and quality standards. b. Get familiar with behavioral driven development. c. Enhance knowledge on pair programming. d. Make sure all the resources completed company provided trainings.
6	a. Conduct work shops and training sessions on pair programming.
#	Solutions – Scrum Principle Violation
7	a. Conduct retrospective in new style. b. Combine another meeting with retrospective ceremony. (Ex. Conduct metric analysis)
8	 a. Reduce the frequency of backlog grooming with the time. b. Conduct backlog estimation in overlap time. c. All the requirement related communication record in agile life cycle management tool. d. Conduct pre-backlog grooming meeting with dev team. e. Conduct post-backlog grooming meeting with onsite/dev team. f. Record backlog grooming session using high quality audio and video recordings and share with offshore team. g. BA conduct grooming with client and with dev team separately. (BA act as agent). h. Conduct story elaboration with core team and client at onsite then sync with offshore dev team.

#	Solutions – Scrum Principle Violation
9	a. DOD needs to get defined with product owner agreement at the contract signoff in work agreement documentation.
10	 a. Spend good amount of time (e.g., 6 weeks) on developing release plan. b. Conduct story elaboration with core team and client at onsite then sync with offshore dev team. c. Set up ground rules with the product owner and never accept changes during the sprint.
11	 a. Conduct awareness session on story writing. b. Maintain a separate section to mention the feedback received during the demo.
12	a. Maintain a separate section to mention the feedback received during the demo.

#	Solutions – Scrum Principle Violation
13	a. Conduct team building activity end of every sprint.
14	a. Propose innovative sprint.b. Conduct internal games at the end of each release.c. Use retrospective ceremony to do retrospective through innovative games.
15	 a. Set up the ground rules with geographically distributed team (e.g., if Dev team is distributed as development team from one geo and testing team is one geo, agreement made as such, defect is count as a defect if developer not fix the defect within a day of recording"). b. Scrum during overlap times. c. Bridge conference open to talk at any time. d. Fix scrum for 15 min and conduct other discussion in separate forums with respective team members. e. Introduce games (e.g., crown awarded to the person who complete maximum no of story points) f. Improve soft skills of the resources. • Use collaborative tools (e.g., WebEx)

- Identified 15 challenges and solution for those challenges.
- Time management and lack of awareness on technologies are key concerns
- Violation of scrum principles and team collaboration are other factors of concern.

Selected references

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