

Background information

Please write your experience in years of software development management:

Answer: ____ years.

Please write your educational background: _____

Please state how many years you have been at the company: ____ years.

Please read the text below which was published in a scientific journal:

"The exploratory testing (ET) approach is commonly applied in industry, but lacks scientific research. The scientific community needs quantitative results on the performance of ET taken from realistic experimental settings. The objective of this paper is to quantify the effectiveness and efficiency of ET vs. testing with documented test cases (test case based testing, TCT). We performed four controlled experiments where a total of 24 practitioners and 46 students performed manual functional testing using ET and TCT. We measured the number of identified defects in the 90-minute testing sessions of testing, the detection difficulty, severity and types of the detected defects, and the number of false defect reports.

The results show that ET found a significantly greater number of defects. Using the two-tailed t-test, we obtained $p = 1.159 \times 10^{-10}$, hence, the defects found using the two approaches were statistically different at $\alpha = 0.05$.

The effect size calculated using Cohen's d statistic also suggested practical significance, i.e., $d = 2.065$ (a large effect size is > 0.8). ET also found significantly more defects of varying levels of difficulty, types and severity levels.

The number of students and practitioners applying ET, the practitioners found on average more defects than students. However, the difference is not statistically significant ($p = 0.07$) when applying the Mann-Whitney U test at $\alpha = 0.05$ (the data had a non-normal distribution).

The two testing approaches, however, did not differ significantly in terms of the number of false defect reports submitted. We conclude that ET was more efficient than TCT in our experiment. ET was also more effective than TCT when detection difficulty, type of defects and severity levels are considered. However, the two approaches are comparable when it comes to the number of false defect reports submitted."

A) Based on the above information, would you introduce exploratory testing techniques in your context?

1. Yes 2. No

B) How confident are you in your decision?

1 – Not at all confident

2 – slightly confident

3 – somewhat confident

4 – Fairly confident

5 – Completely confident

C) Why are you confident/not confident? How did you reason?

D) Based on the above information, would you utilize more senior testers?

1. Yes 2. No

E) How confident are you in your decision?

1 – Not at all confident

2 – slightly confident

3 – somewhat confident

4 – Fairly confident

5 – Completely confident

F) Why are you confident/not confident? How did you reason?

Now consider the following information:

Based on the estimations we can use the research result and instead express the uncertainty in terms of gains and losses.

Using exploratory testing: You have a 3% probability to **save \$20 000**, a 94% probability to **save \$90 000**, and a 3% probability to **save \$180 000**.

Using test case-based testing: You have a 3% probability to **lose \$-10 000**, a 94% probability to **save \$70 000** and a 3% probability to **save \$120 000**.

G) Based on the above information, would you introduce exploratory testing techniques in your context?

1. Yes 2. No

H) How confident are you in your decision?

1 – Not at all confident

2 – slightly confident

3 – somewhat confident

4 – Fairly confident

5 – Completely confident

I) Why are you confident/not confident? How did you reason?

Using senior testers: You have a 3% probability to **lose \$-60**, a 94% probability to **save \$80 000**, and a 3% probability to **save \$150 000**.

Using junior testers: You have a 3% probability to **lose \$-60**, a 94% probability to **save \$10 000**, and a 3% probability to **save \$50 000**.

J) Based on the above information, would you utilize more senior testers?

1. Yes 2. No

K) How confident are you in your decision?

1 – Not at all confident

2 – slightly confident

3 – somewhat confident

4 – Fairly confident

5 – Completely confident

L) Why are you confident/not confident? How did you reason?
