STEVENS
INSTITUTE OF TECHNOLOGY

Qualifier: Consent and Age

Informed Consent

You are being invited to participate in a study to assess learning at Stevens and how it changes over time. This study is part of the PerfStudio project funded by the National Science Foundation and conducted at Stevens by Drs. Lu Xiao, Eman AlOmar, Andre Bondi, and Yu Tao.

A central goal of the PerfStudio project is to understand student perceptions of the teaching practices that lead to improved learning. You are invited to participate in this important study because you are enrolled in one of the software engineering, computer science or systems engineering courses that are part of the study. You will be asked to complete surveys and finish assignments during the semester when you take the class(es). This questionnaire will take approximately 8 minutes.

There are no anticipated risks for individuals participating in this study.

You may **benefit** from specific changes in instructional practices or support provided by Stevens in response to the findings resulting from the survey. Your participation may also indirectly help other students by improving the instructional practices.

Your participation is voluntary, and you may withdraw from participating in this study at any time and for any reason. You may also refuse to answer any question. If you decide not to participate or if you withdraw, there is no impact on your standing at Stevens.

Your responses are confidential. All information will be treated as strictly confidential. All data will be reported in the aggregate only and no one will be able to identify your survey or your responses. Any reports or publications based on data collected for this project will include only group averages. Therefore, it will not be possible to identify any single individual in the report.

If you have any questions about the study or the procedures,

please contact Dr. Lu Xiao at lxiao6@stevens.edu or by calling 201-216-3676.

If you have any questions about your rights as a research subject, or you have concerns or suggestions or you want to talk to someone other than the researchers, you may contact the Stevens IRB by phone: (201-216-8762) or by email: irb@stevens.edu

I agree to participate:

○ Yes
○ No

How old are you? You need to be 18 or older to participate in this study.

○ 17 or younger
○ 18 or older

1. Demographics

What is your major?

○ Software Engineering

○ Computer Science

○ Computer Engineering

○ Cybersecurity

○ [   ] Others, please specify

How many years of programming experience do you have?

○ 0-1 years

○ 1-2 years

○ 3-4 years

○ 5-6 years

○ 7 or more years

When did you start learning programming?

○ Elementary school

○ Middle school

○ High school

○ College

○ [   ] Others, please specify

2. Component Questions

How helpful was the test planning phase in structuring your testing efforts?

1	2	3	4	5
Not helpful at all				Extremely helpful
○	○	○	○	○

How effective was creating and maintaining a Gantt chart in helping you organize and execute the project?

1 Not effective at all	2	3	4	5 Extremely effective
○	○	○	○	○

What did you learn about project management and teamwork from this part?

[   ]

Were the requirements for the project clearly defined?

1	2	3	4	5
Strongly disagree				Strongly agree
○	○	○	○	○

How confident are you now in identifying and resolving ambiguities in requirement specifications after this part?

1	2	3	4	5
Not confident at all	○	○	○	Extremely confident
○				○

What insights did you gain about the importance of clear and detailed requirements in software projects?

How much has using a test-driven development approach improved your understanding of unit testing?

1	2	3	4	5
Not at all	○	○	○	A great deal
○				○

What challenges did you encounter in using mocks and mutation testing, and how did you overcome them?

How well did you understand the objectives of performance testing for this project?

1	2	3	4	5
Not well at all	○	○	○	Extremely well
○				○

How much did measuring execution times for different input sizes impact your understanding of performance testing?

○ 1
　Not at all

○ 2

○ 3

○ 4

○ 5
　A great deal

What did you learn about the relationship between performance metrics and software quality?

[   ]

Did the performance testing results align with your expectations? If not, why?

○ Yes

○ [   ] Not quite. Please explain

How much do you think this project helps you integrate performance testing into the general testing practice?

1	2	3	4	5
Not at all	○	○	○	A great deal
○				○

How confident do you feel now in creating a comprehensive test plan for a software project?

○ 1
Not confident at all

○ 2

○ 3

○ 4

○ 5
Extremely confident

What aspects of test planning (e.g., risk identification, budget considerations) were most insightful for you?

[   ]

3. Before and After

Before this Machine-Readable Travel Document (MRTD) project, how confident were you in applying software testing techniques, including unit testing, performance testing, and mocking?

1	2	3	4	5
Not confident at all ○	○	○	○	Extremely confident ○

Before this project, how well did you understand the integration of performance testing into the software development lifecycle?

1	2	3	4	5
Not well at all ○	○	○	○	Extremely well ○

Before this project, how confident were you in connecting different testing techniques (e.g., unit testing, performance testing) in a cohesive testing strategy?

1	2	3	4	5
Not confident at all ○	○	○	○	Extremely confident ○

How confident are you NOW in applying software testing techniques, including unit testing, performance testing, and mocking?

1	2	3	4	5
Not confident at all	○	○	○	Extremely confident
○				○

How well do you NOW understand the integration of performance testing into the software development lifecycle?

1	2	3	4	5
Not well at all	○	○	○	Extremely well
○				○

How confident are you NOW in connecting different testing techniques (e.g., unit testing, performance testing) in a cohesive testing strategy?

1	2	3	4	5
Not confident at all	○	○	○	Extremely confident
○				○

What was the most valuable skill or knowledge you gained from this project?

[blank box]

What aspects of the project could be improved to enhance your learning experience?

[blank box]

4. Overall evaluation

Overall, how would you rate your experience with this project?

○ Excellent
○ Very good
○ Good
○ Fair
○ Poor

What was the most valuable part of the project for your learning? Check all that apply.

☐ Kickoff & Planning
☐ Requirement Testing
☐ Unit Testing
☐ Performance Testing

☐ Test Planning

What challenges, if any, did you encounter while working on this project?

What improvements would you suggest for this project to enhance learning or clarity?

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