



What Makes a High-Quality Programming Video Tutorial?

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Introduction

- In software development, video tutorials help students and professional programmers to gain knowledge needed to perform programming tasks.
- Our project seeks to understand what makes a high-quality programming video tutorial.
- For this purpose, we gather data on the habits, behaviors, and opinions of programmers of various experience levels.

Methods

Surveys were conducted on Computer Science students and professional developers.

Demographics & Background

- Reviews the prior experiences of individuals in Computer Science.

Programming Video Tutorial Usage & Resource Preferences

- Asks participants about behaviors, preferences, and usages of programming video tutorials.

Comments & Suggestions

- Allows for participants to offer feedback on the improvement of programming video tutorials.

Preliminary Results

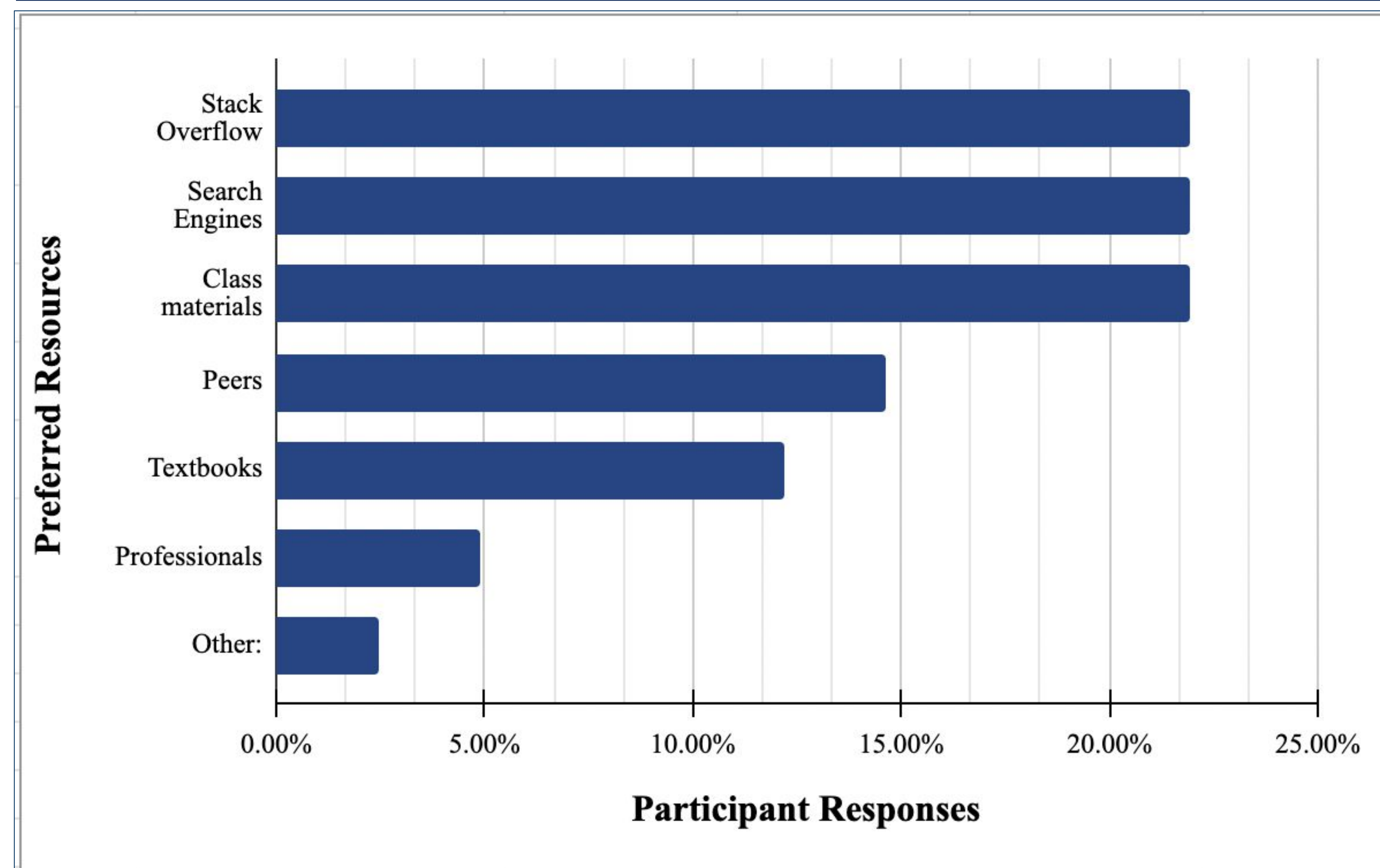
Demographics & Background

- Participants were evenly split between beginner and intermediate programming experience.

Programming Video Tutorial Usage & Resource Preferences

- 40% of participants searched for tutorials with "How to" + [Task] + [Programming Language]
- 60% of participants searched [Task] + [Programming Language].
- Most preferred to watch programming video tutorials under 20 minutes (89%) at normal speed (60%).

Coding Resources for Programming Aid



The most common resources used to assist with programming were Stack Overflow, Search Engines, and Class Materials. About 22% of participants chose these options each.

Most Common Programming Tasks that Encourage Consulting Coding Help Resources

Tasks	Percent Selected
Learning a new programming language	31.03%
Debugging an error	31.03%
Implementing a few features in an existing software system	13.79%
Learning a new platform, tool, or technology	13.79%
Developing a new software system or app from scratch	10.34%

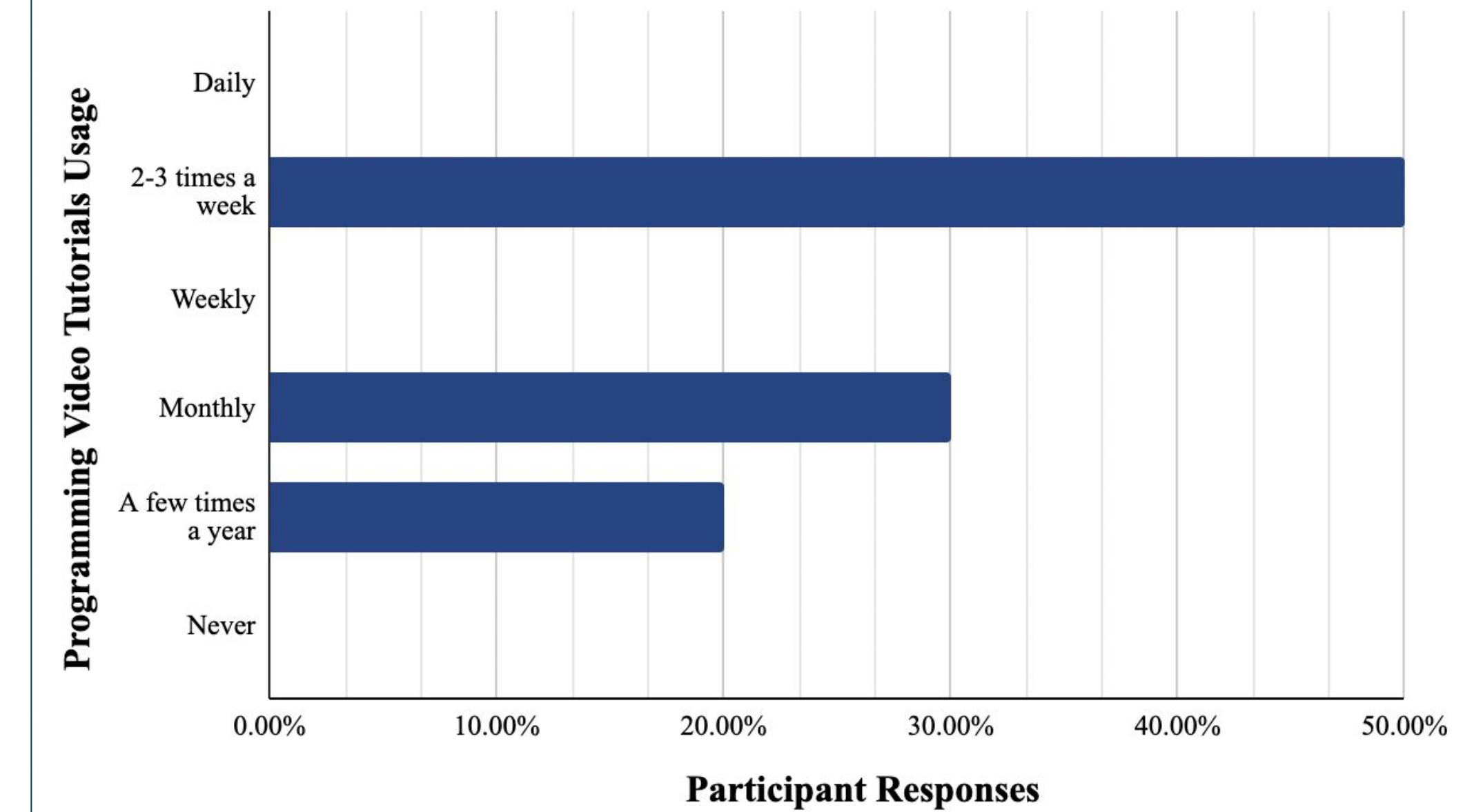
Top 5 Most important Aspects of a Programming Video Tutorial

Aspect	Mean	Standard Deviation	Variance
The programming language of the video	4.78	0.42	0.17
The depth of the explanations provided	4.67	0.47	0.22
The picture quality of the video itself	4.44	0.68	0.47
The breadth of the topic coverage in the video	4.22	1.03	1.06
The title and textual description of the video	4.22	0.79	0.62

Top 5 Least important Aspects of a Programming Video Tutorial

Aspect	Mean	Standard Deviation	Variance
The quality of the comments	2.7	1.62	2.61
The age of the video	2.7	1.42	2.01
The number of subscribers of the video creator	2.22	0.92	0.84
The number of the comments	2	0.89	0.8
The thumbnail of the video	1.78	1.23	1.51

Programming Video Tutorial Usage



50% of the participants used programming video tutorials 2-3 times a week in the last year while the other half used them much less frequently.

Preliminary Results (cont.)

Comments & Suggestions

- A combination of visual & auditory learning is the most preferred medium for participants
- Participants that preferred programming video tutorials favored *visually seeing the program being coded in real-time*.
- The ideal programming video tutorial is 5-20 minutes long in a preferred programming language.
- *Consistent, detailed explanations* were the most common trend in regard to what makes a good programming video tutorial.

References

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