TLS API Usability Evaluation: Inspirational Questions

Inspirational questions for the participant evaluation report were selected from the *Cognitive Dimensions Questionnaire* [1] according to task relevance:

1. Do you find the API abstraction level appropriate to the task?
2. Did you have to learn about the underlying architecture of the API and other conceptual information before starting to do anything useful related to your task?
3. What are the information you had to maintain while completing the tasks?
4. Does the amount of code required for this scenario seem just about right, too much, or too little? Why?
5. How easy is it to stop in the middle of the scenario and check the progress of work so far?
6. When you are working with the API, can you work on your programming task in any order you like, or does the system force you to think ahead and make certain decisions first?
7. What are the places where you had to understand the intricate working details of the API while you work on your programming task?
8. *Did you have to extend types exposed by the API by providing their own implementation of custom behavior to accomplish task? What are the types you had to extend? Explain why you needed to extend the original type provided by the API in each case.
9. When you need to make changes to previous work, how easy is it to make the change?
10. Were there different parts of the API that mean similar things, is the similarity clear from the way they appear?
11. When reading code that uses the API, is it easy to tell what each section of code does?
12. Did the types of the API map directly onto the types and concepts you expected?
13. †Did API give any help to identify that you used the API incorrectly?
14. *Have you came up with incidents where you incorrectly used the API and then identified the correct way of doing that? Did API give any help to identify that you used the API incorrectly? If there any similar incidents, please explain.
15. *Do you think the security of the end user of the application you developed, depends on how you completed the task? Or does it depend only on the security API you used?
16. *Did the API provide any guidance on how to test your application?

* An asterisk at the beginning of the question indicates that this question was added from the second round of the study.
†A cross at the beginning of the question indicates that this question was only present in the first round of the study.

References

1. Wijayarathna, C., Arachchilage, N.A.G., Slay, J.: A generic cognitive dimensions questionnaire to evaluate the usability of security APIs. In: Tryfonas, T. (ed.) Human Aspects of Information Security, Privacy and Trust. pp. 160–173. Springer International Publishing (2017)