

Augmented Reality Usability Survey

This survey was developed based on Brooke (1996), Lee et al. (1996) and Hoonakker et al. (2011).

*When using this document, please cite as:
(publications forthcoming)*

References

- Brooke, J. (1996). SUS: A "quick and dirty" usability scale. In P. W. Jordan, B. A. Werdmeester, & A. L. McClelland (Eds.), *Usability Evaluation in Industry* (pp. 189-194). London: Taylor & Francis.
- Hoonakker, P. L. T., Cartmill, R. S., Carayon, P., & Walker, J. M. (2011). Development and psychometric qualities of the SEIPS survey to evaluate CPOE/EHR implementation in ICUs. *International Journal of Healthcare Information Systems and Informatics (IJHISI)*, 6(1), 51-69.
- Lee, F., Teich, J. M., Spurr, C. D., & Bates, D. W. (1996). Implementation of physician order entry: User satisfaction and self-reported usage patterns. *Journal of the American Medical Informatics Association*, 3(1), 42-55.

Start of Block: Default Question Block

Q1 Study ID

Q2 Based on your experience, please indicated whether the following statements about the AR mobile application are true. Check one box based on the following scale. 1. The AR mobile application is reliable – it does its job consistently.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q3 2. The AR mobile application will improve my productivity.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q4 3. The AR mobile application will have a negative impact on patient care.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q5 4. The AR mobile application will reduce patient care errors

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q6 5. The AR mobile application is easy to use

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q7 6. Compared to routine code cart education, the AR mobile application slows me down

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q8 7. The AR mobile application gives me the information I need to find supplies during a pediatric resuscitation.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q9 8. I feel that I had adequate training on the AR mobile application.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q10 9. The AR mobile application will improve quality of patient care.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q11 10. System response time on the AR mobile application is slow.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q12 11. When I have a problem with the AR mobile application, I can just ask someone for help.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q13 12. I feel that I can benefit from refresher courses on the weight-based pediatric code cart.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q14 13. When I need help on the AR mobile application, I can find it.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q15 14. Overall, the AR mobile application improves the safety of care I provide.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q16 15. Overall, the AR mobile application saves me time.

- Never 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Always 7 (7)
-

Q17 16. Overall, I am satisfied with the AR mobile application.

- Never 1 (1)
- 2 (2)
- 3 (3)
- It varies 4 (4)
- 5 (5)
- 6 (6)
- Always 7 (7)

Page Break

Q18 The following questions ask you about specific features in the AR mobile application. Please put a check next to the features you use and indicate whether you find them useful by checking a number on the scale.

17. Instructions and tutorial video

- Not at all useful 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Extremely Useful 7 (7)
-

Q19 18. Free play interface

- Not at all useful 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Extremely Useful 7 (7)
-

Q20 19. Timed search interface

- Not at all useful 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Extremely Useful 7 (7)
-

Q21 20. Scenario interface

- Not at all useful 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Extremely Useful 7 (7)
-

Q22 21. Clinical pearls

- Not at all useful 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Extremely Useful 7 (7)
-

Q23 22. "Gamification" of code cart training

- Not at all useful 1 (1)
 - 2 (2)
 - 3 (3)
 - It varies 4 (4)
 - 5 (5)
 - 6 (6)
 - Extremely Useful 7 (7)
-

Q24 23. Leader boards

- Not at all useful 1 (1)
- 2 (2)
- 3 (3)
- It varies 4 (4)
- 5 (5)
- 6 (6)
- Extremely Useful 7 (7)

Page Break

Q25 24. Please check the box that best reflects your acceptance of the AR mobile application.

- Dislike very much and don't want to use 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Like very much and eager to use 7 (7)
-

Q26 25. What are your overall reactions to the AR mobile application?

- Difficult 1 (1)
 - 2 (2)
 - 3 (3)
 - 4 (4)
 - 5 (5)
 - 6 (6)
 - Easy 7 (7)
-

Q27 26. What are your overall reactions to the AR mobile application?

- Frustrating 1 (1)
 - 2 (2)
 - 3 (3)
 - 4 (4)
 - 5 (5)
 - 6 (6)
 - Satisfying 7 (7)
-

Q28 27. The AR mobile application functions as I expect

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Page Break

Q29 Based on your experience, please indicated whether you agree with the following statements about the AR mobile application. Check one box based on the following scale. 28.
I think that I would like to use this application frequently.

- Stongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - Dislike a little (5)
 - Dislike a moderate amount (6)
 - Strongly Agree 7 (7)
-

Q30 29. I found the application unnecessarily complex.

- Stongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q31 30. I thought the application was easy to use.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q32 31. I think that I would need to support of a technical person to be able to use this application.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q33 32. I found the various functions in this application were well integrated.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q34 33. I thought there was too much inconsistency in this application.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q35 34. I would imagine that most people would learn to use this application very quickly.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q36 35. I found the application very cumbersome to use.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q37 36. I felt very confident using the application.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q38 37. I needed to learn a lot of things before I could get going with this application.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Page Break

Q39 This section asks about the AR mobile application. Please rate the following characteristics of the mobile application

38. Learning to operate the mobile application

Difficult 1 (1)

2 (2)

3 (3)

4 (4)

5 (5)

6 (6)

7 (7)

8 (8)

9 (9)

Easy 10 (10)

Q40 39. Exploring new features by trial and error

Difficult 1 (1)

2 (2)

3 (3)

4 (4)

5 (5)

6 (6)

7 (7)

8 (8)

9 (9)

Easy 10 (10)



Q41 40. Tasks can be performed in a straightforward manner

Difficult 1 (1)

2 (2)

3 (3)

4 (4)

5 (5)

6 (6)

7 (7)

8 (8)

9 (9)

Easy 10 (10)



Q42 41. Experienced and inexperienced users' needs are taken into consideration

Difficult 1 (1)

2 (2)

3 (3)

4 (4)

5 (5)

6 (6)

7 (7)

8 (8)

9 (9)

Easy 10 (10)



Q43 42. Correcting your mistakes

Difficult 1 (1)

2 (2)

3 (3)

4 (4)

5 (5)

6 (6)

7 (7)

8 (8)

9 (9)

Easy 10 (10)

Page Break

Q44 43. I am confident in my knowledge of the equipment contained in the code cart.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q45 44. I am confident I could find what I needed in the code cart during an emergency.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q46 45. I am confident I could find what I needed in the code cart during an emergency.

Strongly Disagree 1 (1)

2 (2)

3 (3)

Neutral 4 (4)

5 (5)

6 (6)

Strongly Agree 7 (7)

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Q47 46. Do you have a cell phone or a smart device?

Yes (1)

No (2)

Q48 47. What kind of cell phone or smart device do you carry? (ex: iPhone 6)

Q49 48. Did you use the code cart training app during this course?

Yes (1)

No (2)

Q50 49. How many hours did you spend using the app?

Page Break _____

Q51 50. I think that I would use this learning application on my phone.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q52 51. I think I would use this learning application when working at the hospital

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q53 52. I found the instructions to use the app to be simple to understand

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q54 53. I found the "free play" interface to be simple to use

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q55 54. I found the "timed search" interface to be simple to use

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

Q56 55. I would imagine this application would help me to take care of patients in the hospital.

- Strongly Disagree 1 (1)
 - 2 (2)
 - 3 (3)
 - Neutral 4 (4)
 - 5 (5)
 - 6 (6)
 - Strongly Agree 7 (7)
-

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Q57 56. What additional features or other versions of this app would you like to see?

Q58 57. What needs to be improved?

Q59 58. Any other comments?

End of Block: Default Question Block
