

QUESTIONNAIRE AND SURVEY ITEMS

Article “Who carries the load? Role-specific cognitive load and team performance in a multi-role virtual reality emergency simulation: an exploratory pilot study of collaborative clinical reasoning in undergraduate medical education.”

Pre-Items | Post-Items

Items 1 – 18: Written by the study’s authors

Items 19 – 30: TEAM score

Items 31 – 72: NASA-TLX score

1. Unique ID for each participant
2. Number of participants in an experimental group
3. Semester of study in which the tutorial participant is enrolled
4. Date on which the group completed the scenario
5. Sequential session number
6. Name of the student tutor who led the session/tutorial
7. **How often have you used VR in your life?** (1) Never (0 times) (2) rarely (1 to 5 times) (3) occasionally (up to 10 times) (4) frequently (>10 times)
8. **I am familiar with the procedures in an emergency department.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
9. **I can apply clinical guidelines in a targeted and condition-specific manner.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
10. **I can distinguish between emergency medical conditions using differential diagnosis.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
11. **I am familiar with the principles of Crew Resource Management and can apply them.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
12. **I am confident in my ability to make clinical decisions in emergency situations.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
13. **I am familiar with the procedures in an emergency department.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
14. **I can apply clinical guidelines in a targeted and condition-specific manner.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
15. **I can distinguish between emergency medical conditions using differential diagnosis.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
16. **I am familiar with the principles of Crew Resource Management and can apply them.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
17. **I am confident in my ability to make clinical decisions in emergency situations.** (1) strongly disagree (2) disagree (3) agree (4) strongly agree
18. Email address, if willing to participate in a focus group
19. TEAM score, dimension 1—Leadership: The team leader let the team know what was expected of them through instructions (0–4 points)

20. TEAM score, dimension 1—Leadership: The team leader maintained a global perspective (0–4 points)
21. TEAM score, dimension 2—Teamwork: The team communicated effectively (0–4 points)
22. TEAM score, dimension 2—Teamwork: The team worked together to complete tasks in a timely manner (0–4 points)
23. TEAM score, dimension 2—Teamwork: The team acted with composure and control (0–4 points)
24. TEAM score, dimension 2—Teamwork: The team’s attitude was positive (0–4 points)
25. TEAM score, dimension 2—Teamwork: The team adapted to changing situations (0–4 points)
26. TEAM score, dimension 2—Teamwork: The team reassessed the situation (0–4 points)
27. TEAM score, dimension 2—Teamwork: The team anticipated potentially necessary actions (0–4 points)
28. TEAM score, dimension 3—Task management: The team prioritized tasks (0–4 points)
29. TEAM score, dimension 3—Task management: The team followed recognized standards and guidelines (0–4 points)
30. TEAM score, overall performance (1–10 points)
31. Participant’s role in evaluation round 1 (7 possible options; select one only: player, team lead, recorder, guideline role 1, guideline role 2, handover, or a combination of at least 2 roles)
32. Round 1, NASA-TLX score: Mental Demand
33. Round 1, NASA-TLX score: Physical Demand
34. Round 1, NASA-TLX score: Temporal Demand
35. Round 1, NASA-TLX score: Performance
36. Round 1, NASA-TLX score: Effort
37. Round 1, NASA-TLX score: Frustration
38. Participant’s role in evaluation round 2 (7 possible options; select one only: player, team lead, recorder, guideline role 1, guideline role 2, handover, or a combination of at least 2 roles)
39. Round 2, NASA-TLX score: Mental Demand
40. Round 2, NASA-TLX score: Physical Demand
41. Round 2, NASA-TLX score: Temporal Demand
42. Round 2, NASA-TLX score: Performance
43. Round 2, NASA-TLX score: Effort
44. Round 2, NASA-TLX score: Frustration
45. Participant’s role in evaluation round 3 (7 possible options; select one only: player, team lead, recorder, guideline role 1, guideline role 2, handover, or a combination of at least 2 roles)
46. Round 3, NASA-TLX score: Mental Demand
47. Round 3, NASA-TLX score: Physical Demand
48. Round 3, NASA-TLX score: Temporal Demand
49. Round 3, NASA-TLX score: Performance
50. Round 3, NASA-TLX score: Effort
51. Round 3, NASA-TLX score: Frustration
52. Participant’s role in evaluation round 4 (7 possible options; select one only: player, team lead, recorder, guideline role 1, guideline role 2, handover, or a combination of at least 2 roles)
53. Round 4, NASA-TLX score: Mental Demand
54. Round 4, NASA-TLX score: Physical Demand

- 55. Round 4, NASA-TLX score: Temporal Demand
- 56. Round 4, NASA-TLX score: Performance
- 57. Round 4, NASA-TLX score: Effort
- 58. Round 4, NASA-TLX score: Frustration
- 59. Participant's role in evaluation round 5 (7 possible options; select one only: player, team lead, recorder, guideline role 1, guideline role 2, handover, or a combination of at least 2 roles)
- 60. Round 5, NASA-TLX score: Mental Demand
- 61. Round 5, NASA-TLX score: Physical Demand
- 62. Round 5, NASA-TLX score: Temporal Demand
- 63. Round 5, NASA-TLX score: Performance
- 64. Round 5, NASA-TLX score: Effort
- 65. Round 5, NASA-TLX score: Frustration
- 66. Participant's role in evaluation round 6 (7 possible options; select one only: player, team lead, recorder, guideline role 1, guideline role 2, handover, or a combination of at least 2 roles)
- 67. Round 6, NASA-TLX score: Mental Demand
- 68. Round 6, NASA-TLX score: Physical Demand
- 69. Round 6, NASA-TLX score: Temporal Demand
- 70. Round 6, NASA-TLX score: Performance
- 71. Round 6, NASA-TLX score: Effort
- 72. Round 6, NASA-TLX score: Frustration