

Detailed Items of Measurements

Note: All statements are rated on a standard 7-point Likert Scale:

1 – Strongly disagree; 2 – Disagree; 3 – Somehow disagree; 4 – Neither agree nor disagree; 5 – Somehow agree; 6 – Agree; 7 – Strongly agree

RQ1/3 ii) Perceived engagement in the critical reading process (adapted from [1])

- I was absorbed in this critical reading process.
- I was so involved in reading this paper that I lost track of time.
- I was really engaged in the critical reading process.

RQ1/3 ii) Perceived difficulty in the critical reading process (adapted from [2])

- How difficult it was for you to read this paper critically? (1 – Very easy, 7 – Very Difficult)

RQ1/3 iii) Perceived performance in the critical reading outcome (adapted from [3])

- I had a deep examination of some claims, their supporting points and/or possible counterarguments in this paper.
- I reinterpret and reconstructed some points of the paper for improved clarity and readability in this paper.
- I identified some possible ambiguities and flaws in the author's reasoning, and even thought some ways to address them comprehensively in this paper.

Note: The statements below are for the CReBot condition. For the Guideline condition, change the “CReBot” to “Guideline” in the statements.

RQ2/4 i) Interaction with CReBot/Guideline

- How frequently did you refer to CReBot's guidance for critical reading? (1 – Never, 7 – Always)

RQ2/4 ii) Interruption (adapted from [4])

- I found CReBot interrupting my reading process.

RQ2/4 ii) Technology acceptance (adapted from [5][6])

- **Usefulness**
 - The use of the CReBot enables me to read papers in a more critical manner.
 - Using CReBot improves my performance in digesting this paper.
 - The use of CReBot enhances my effectiveness in my critical reading task.
 - I find the CReBot useful in my critical reading process.
- **Ease of use**
 - I would find the CReBot to be flexible to interact with.
 - My interaction with the CReBot is clear and understandable.
 - Interacting with the CReBot does not require a lot of my mental effort.
 - I find it easy to get what I want from the CReBot.
- **Intention to use**
 - If the CReBot is available there to help me read my interested papers critically, I would use it.

- I intend to be a heavy user of the CReBot when I want to have a critical reading on the papers.

[1] Ziming Wu, Yulun Jiang, Yiding Liu, and Xiaojuan Ma. 2020. Predicting and Diagnosing User Engagement with Mobile UI Animation via aData-Driven Approach. InProceedings of the 2020 CHI Conference on Human Factors in Computing Systems(Honolulu, HI, USA)(CHI '20). Associationfor Computing Machinery, New York, NY, USA, 1–13. <https://doi.org/10.1145/3313831.3376324>

[2] Sandra G. Hart and Lowell E. Staveland. 1988. Development of NASA-TLX (Task Load Index): Results of Empirical and Theoretical Research. InHuman Mental Workload, Peter A. Hancock and Najmedin Meshkati (Eds.). Advances in Psychology, Vol. 52. North-Holland, 139–183.

[https://doi.org/10.1016/S0166-4115\(08\)62386-9](https://doi.org/10.1016/S0166-4115(08)62386-9)

[3] Louis Althusser and Étienne Balibar. 1970.Reading Capital.

[4] Zhenhui Peng, Yunhwan Kwon, Jiaan Lu, Ziming Wu, and Xiaojuan Ma. 2019. Design and Evaluation of Service Robot's Proactivity in Decision-Making Support Process. InProceedings of the 2019 CHI Conference on Human Factors in Computing Systems(Glasgow, Scotland Uk)(CHI '19).Association for Computing Machinery, New York, NY, USA, 1–13. <https://doi.org/10.1145/3290605.3300328>

[5] Viswanath Venkatesh and Hillol Bala. 2008. Technology Acceptance Model 3 and a Research Agenda on Interventions.Decision Sciences39, 2 (2008),273–315. <https://doi.org/10.1111/j.1540-5915.2008.00192.x>

[6] Thiemo Wambsganss, Christina Niklaus, Matthias Cetto, Matthias Söllner, Siegfried Handschuh, and Jan Marco Leimeister. 2020. AL: An AdaptiveLearning Support System for Argumentation Skills.

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<https://doi.org/10.1145/3313831.3376732>