



Enhancing participation in visual data collection in online surveys: Evidence from an experimental study about remote work environments

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Assessing Remote Work Conditions: Context and Approach

Remote work has become more widespread + Working conditions influence productivity as well as physical & mental well-being = Assessing the **quality of remote working conditions** is therefore essential


Main limitations of conventional surveys: social desirability + high burden → Proposed solution = **request photos** → Challenges

Strategies to Improve Participation

 **Follow-up:** To what extent does presenting a follow-up prompt affect participation? (*RQ1*)

 **Extra incentive main:** To what extent do participation rates differ when offering an extra incentive? (*RQ2*)

 **Reminder email:** To what extent does sending a reminder affect participation? (*RQ3*)

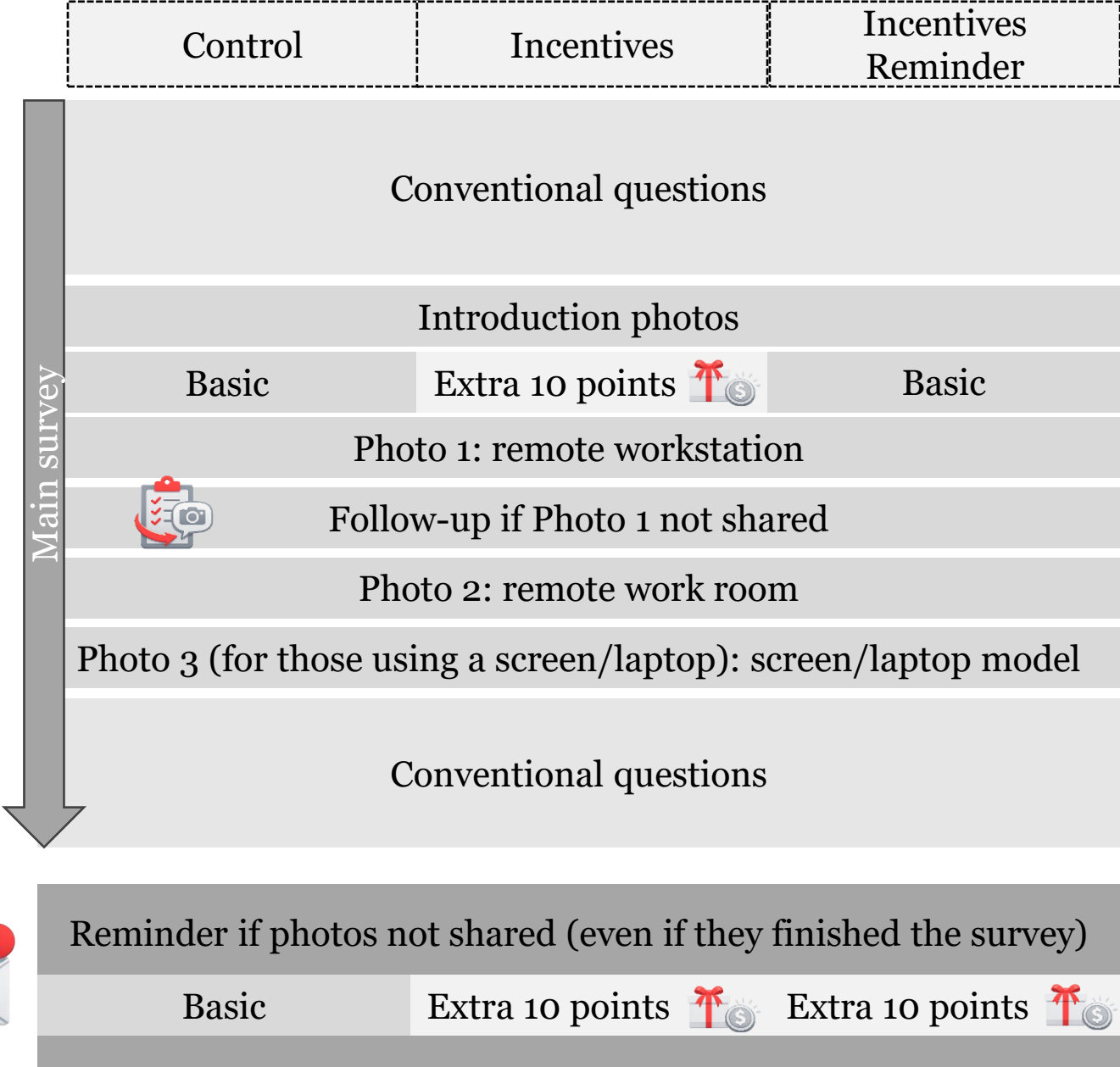
 **Extra incentive reminder:** Does including an extra incentive in the reminder further increase participation? (*RQ4*)

Data Collection



- Online survey
- Smartphone or tablet only
- December 2025
- Target population: adults aged 18–65 who had worked from home for 7+ hours per week on average during the previous 2 months
- Soft quotas for gender & age
- 2,326 eligible respondents started
- 1,346 were assigned to an experimental group

Study Design



Analyses, how we measured participation and quality

01 Participation

- % of the **1,346 assigned respondents** who shared each photo, by stage: initial request → within-survey follow-up → email reminder.
- Photo 3 restricted to **computer users** (N = 1,304).

02 Data quality

- **Usable** = in line with the request + classifiable (Photo 3 also: device-label readability — brand / type / model visible).
- **Coherence** = % discrepancy vs 13 equivalent conventional questions (lower = better).
- **Self-reported problems** = % reporting any difficulty taking or uploading.

03 Tests

- **Binary indicators**: z-tests (Fisher's exact when cells are small).
- **Discrepancy**: t-tests.

Results, participation

In %	Total	Control	Incent.	Inc.+Re m.
Photo 1 – initial	54.9	56.3	54.7	53.7
Photo 1 – follow-up	9.2	10.2	7.5	9.8

- **RQ1 – Follow-up:** a within-survey prompt adds +9.2% who share Photo 1. Substantial gain.

Table 1. % of assigned respondents sharing each photo, by stage.

Results, participation

In %	Total	Control	Incent.
Photo 1 – initial	54.9	56.3	54.7
Photo 1 – follow-up	9.2	10.2	7.5
Photo 1 – reminder	4.2	3.0	4.2
Total Photo 1	67.5	68.9	65.9
Photo 2	58.2	59.1	56.5
Photo 2 – reminder	6.5	5.4	6.1
Total Photo 2	63.8	64.1	61.7
Photo 3	58.7	59.5	57.2
Photo 3 – reminder	6.5	5.0	7.2
Total Photo 3	64.0	63.7	63.0

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- **RQ2 – Extra incentive:** no rise in participation, against expectations but in line with Höhne et al. (2024).

Results, participation

In %	Total	Control	Incent.	Inc.+Rem.
Photo 1 – initial	54.9	56.3	54.7	53.7
Photo 1 – follow-up	9.2	10.2	7.5	9.8
Photo 1 – reminder	4.2	3.0	4.2	5.5
Total Photo 1	67.5	68.9	65.9	67.7
Photo 2	58.2	59.1	56.5	59.0
Photo 2 – reminder	6.5	5.4	6.1	7.9
Total Photo 2	63.8	64.1	61.7	65.5
Photo 3	58.7	59.5	57.2	59.5
Photo 3 – reminder	6.5	5.0	7.2	7.4
Total Photo 3	64.0	63.7	63.0	65.1

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- **RQ3 – Email reminder:** recovers a further meaningful share (up to ~5–8% across photos). Smaller than the follow-up but not negligible.

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- **RQ4 – Incentive timing:** final participation similar whether announced upfront or in the reminder; slight trend favouring the reminder.

Results, data quality

Each finding mapped to the three quality indicators: usable, coherence, and self-reported problems.

	Usable	Coherence	Self-reported
RQ1 <i>Follow-up</i>	Essentially unchanged: 99.1% vs 98.4% in line; 99.2% vs 96.8% classifiable.	Slightly higher discrepancy at follow-up (30.5% vs 26.3%).	Slightly higher at follow-up (17.2% vs 13.5%).
RQ2 <i>Extra incentive</i>	More in-line workspace photos: 99.4% vs 96.5% ($p = 0.001$). Photo 3 not significant.	Lower discrepancy: 24.2% vs 26.8% ($p = 0.005$).	No difference (8.9% vs 10.0%, n.s.).
RQ3 <i>Email reminder</i>	Workspace usability comparable (~92% in line, ~96% classifiable). Photo 3 drops: 63.6% vs 73.3%.	Slightly higher discrepancy at reminder stage.	No clear pattern in Control group.
RQ4 <i>Incentive timing</i>	Upfront better for workspace (98.9% vs 97.1%, $p = 0.04$). Photo 3 reverses: 81.2% vs 63.6%.	No significant differences; small N limits interpretation.	Higher at reminder for IncentiveReminder.

Key takeaways and open questions

ISSUES



Some **practical implementation problems** occurred, though infrequently.

CONCLUSIONS



Visual data is rich, but **participation is the main challenge**, here good ($\approx 64-67\%$).



Within-survey follow-ups are the **most effective lever** ($+\approx 9\%$ on Photo 1, little quality cost).



Reminders recover up to $\approx 8\%$ **more**; usability holds for workspace photos, drops slightly for device-label.



Extra incentives don't lift participation but **slightly improve photo quality**.



Photo type matters more than prompting: device-label remains persistently difficult, except under IncentiveReminder (81.2% vs 63.6%).

DISCUSSION



What should our next steps be to **assess data quality**?



How do we best investigate the **underlying behavioural mechanisms**?



What **other questions** should we be asking?

Thanks!
Any questions?



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<https://www.upf.edu/web/webdataopp>

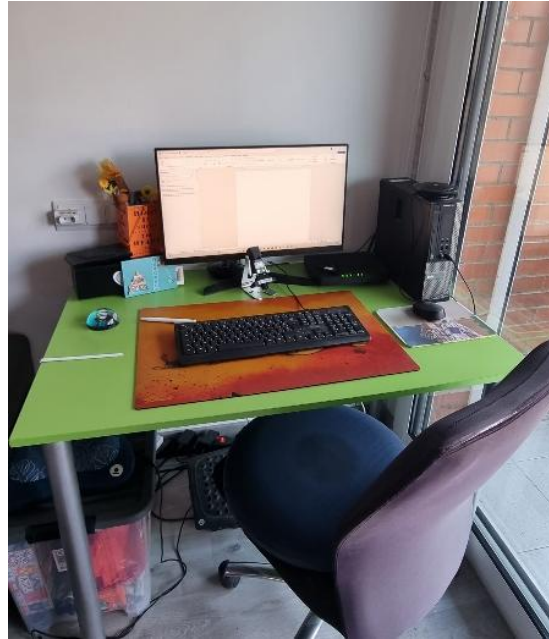
Encuesta

Now we will ask you to take three photos of the space where you mainly work at home, with the device you are using to respond.

Before taking the photos, hide any personal information (for example, photos of yourself or family members).

You can delete and retake the photos if you are not satisfied with them.

▲ IMPORTANT: To thank you for your effort, you will receive 10 extra Korus 🪙 in exchange for your photos, in addition to the Korus for completing the rest of the survey.



Encuesta

You have not shared any photo of your workstation in the previous question. This photo is essential for our research. Please, consider taking and sharing it.

▲ IMPORTANT: Remember that if you do not share the photo, you will not receive the **extra 10 korus**.

If you are having problems with your camera, you can access the survey from your smartphone or tablet. If you are not at home, you can access the survey later and return directly to this page to continue where you left off.

Please indicate what you would like to do:

- Upload the photo now
- Come back later
- Skip to the next photo
- Skip to the next question that does not require photos



