# Cognitive Interviewing and what it can be used for

## Case study 1: The Responsible Gambling Trust - Return to player messages[[1]](#footnote-1)

Research commissioned by the Responsible Gambling Trust explored machine players’ understanding of the ‘return to player’ (RTP) messages displayed on gaming machines. These messages advertise what proportion of money is returned to players in prizes and form part of a package of measures to promote responsible gaming. The Gambling Commission had expressed concern that these messages were not understood by players. A small-scale, qualitative study, using cognitive interviewing methods was undertaken to explore players’ understanding and perceived utility of RTP information, involving face-to-face interviews with 25 players.

An interview protocol was developed and used with all participants, this showed when to prompt think aloud and contained scripted probes. In the interview, participants were shown a set of five different messages on win chances, which are included in different RTP messages.

* Message 1 showed a ‘basic’ RTP message.
* Messages 2a and 2b showed information indicating whether a machine was compensated or random.
* Message 3 showed an explanation that the odds of winning are not indicated by the game features or display.
* Message 4 showed a variation of an RTP message where the average percentage pay out varied depending on the stake size.

Each message was displayed on a card and shown to the participant in turn. Following an introductory exercise to explain think-aloud techniques, participants were asked to think aloud when reading each message. Interviewers then asked a series of follow up cognitive probes following the think aloud.

Evidence from this study suggested that current RTP messages were not well understood for a number of reasons, supporting the Gambling Commission’s concerns:

* Messages used technical language that did not hold the same meaning for the general population as industry specialists.
* Messages used complex terms that had ambiguous or unclear meaning.
* The provision of messages in English only added to difficulties with understanding them for those for whom English is a second language.

The use of mathematical concepts and language such as ‘average’ payout, ‘random’ payout schedule and the expression of win chance as a percentage assumed a level of mathematical literacy that some players did not possess.

## Case study 2: National Survey for Wales - Advance materials[[2]](#footnote-2)

To ensure that the National Survey for Wales National provides a true picture of the views and experiences of the population of Wales, it is important that as many people as possible take part in the survey. Survey advance materials have a significant part to play in this process. The Welsh Government asked for advance materials (a survey letter, leaflet, and postcard) to be desk reviewed and cognitively tested to ensure they are as engaging as possible.

In order to evaluate the advance materials and questions, NatCen Social Research was commissioned to carry out the desk review and two rounds of cognitive testing interviews. The desk review was carried out by researchers in NatCen’s Questionnaire Development and Testing Hub who are experts in questionnaire design and cognitive interviewing. NatCen’s campaigns and marketing manager, who has expertise in material design and respondent engagement, also contributed to the review and redesign of the advance materials.

NatCen researchers, who have extensive experience in conducting cognitive interviews, carried out 20 interviews across the two rounds. Respondents were interviewed in a neutral venue in both locations, that is, the venue was a community venue, rather than the respondents’ homes or the researchers’ office. Interviews lasted about an hour and were audio recorded with the respondents’ consent. Respondents for both rounds of cognitive testing were recruited in advance of testing via a recruitment agency. Interviews for Round 1 of testing were carried out in Cardiff, and interviews for Round 2 were carried out in Wrexham to test the questions with a range of people from a large urban town and a smaller town in a different part of Wales. This was done because geographic location could have an impact on how respondents answer the survey questions.

The documents were placed in an envelope and handed to the respondent. They were then asked to imagine that they had received them through the post. Participants were probed to see how they would react if they received the documents (e.g., would they read them immediately, skim through them, come back to them at a later point or throw them away), what they thought of the content of the documents and what would make them more or less likely to take part in the survey. Probing questions and observations were used to determine respondents’ reactions to the documents with specific probes focusing on the incentive or lack of and how this might have affected their behaviour. A mixture of observations, think aloud and probing techniques were used throughout the interviews.

The first round of testing was used to identify any major problems with the materials. The second round of testing was used to re-test changes made to materials following round one. In round 1, a letter and leaflet about the survey were placed in an envelope and handed to respondents. Respondents were asked to imagine they had received the envelope in the post and what they would do with it. Once interviewers had gauged their natural reactions to the materials, participants were asked follow-up probes to determine what they thought of the materials. Changes to the letter were made based on the recommendations from the first round of testing. The materials were then tested in the second round. Based upon feedback on this second round, recommendations were made as to how to proceed with the advance materials.

The cognitive testing findings showed that, overall, the materials worked well. Respondents were able to comprehend them and found the materials engaging. In some cases, small wording and design revisions were suggested to make the materials and more comprehensible; these changes were tested in the second round. The findings for the second round of testing indicated that the materials could benefit from further minor design tweaks, but the wording overall was easily understood and engaging to respondents.

## Case study 3: The Electoral Commission -Impact of party name description and emblem on the usability of ballot papers[[3]](#footnote-3)

This research aimed to develop the Commission’s understanding of how voters interact with party identifiers (name, description, and emblems) on the ballot paper and how this may affect their ability to mark the ballot in accordance with their intention. Participants in the study were asked to use mocked-up ballot papers featuring a number of basic similarities between party names, descriptions, and emblems. This was designed to develop the Commission’s knowledge base about which party identifiers people use when voting and the circumstances in which party identifiers could lead to confusion or miscast votes. The findings were intended to help inform future registration decisions and further potential research around the registration of party identifiers.

This project involved testing ballot papers using cognitive interviewing. Two types of cognitive interview were used as part of this project:

* **Eye-tracking interviews:** Participants were asked to vote using a life-size ballot paper on a computer screen. In these interviews participants’ eye-movements were recorded when they voted. Participants were then shown a video depicting what elements of the ballot papers they had looked at and what elements they had ignored. All interviews took place in London conducted at City University’s Human Computer Interaction Lab.
* **Hall-testing interviews:** In these interviews standard cognitive interviewing methods were used (think aloud and probing). In both types of interview, interviews were carried out face-to-face by members of the research team and, in the case of hall testing, experienced cognitive interviewers.

Through using these methods, the following observations were noted as being particularly significant:

* Having multiple identifiers (party name, party emblem and candidate name) on ballot papers is useful as different people use different identifiers when voting.
* Evidence from this test is that party descriptions did not help participants identify their target party.
* Some participants used candidate name as the only identifier rather than any party identifiers.
* Similarities between party names can result in both voter confusion and miscast votes.
* Similar words in the additional party descriptions on the EU ballot paper did not result in confusion or miscast votes as participants were not using these as primary identifiers.
* Similarities in party emblems can lead to confusion and miscast votes.

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2. Jonas, M., Comanaru, R., and Pilley, S. (2017) National Survey for Wales: cognitive testing of advance materials and housing survey consent question. [online]. Available at: https://www.gov.wales/sites/default/files/statistics-and-research/2019-02/national-survey-wales-cognitive-testing-advance-materials-housing-survey-consent-question.pdf. [↑](#footnote-ref-2)
3. Collins, D. and d’Ardenne, J. (2015) The impact of party name, description, and emblem on the usability of ballot papers: Findings from eye-tracking and cognitive interviews [online]. Available at: https://www.researchgate.net/publication/306685611\_The\_impact\_of\_party\_name\_description\_and\_emblem\_on\_the\_usability\_of\_ballot\_papers\_Findings\_from\_eye-tracking\_and\_cognitive\_interviews [↑](#footnote-ref-3)