

The quality of survey based digital reading

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Introduction

The need of publishers and media agencies to understand readership on paper as well as via digital platforms, has been the trigger to re-design readership surveys and include digital reading. This is also the reason for many data integration projects in which the data of traditional readership surveys are integrated with online currencies. Asking respondents about their digital reading is relevant for both types of approach: either to report total readership based on the survey based, claimed behavior collected in the readership survey, or to use it as fusion hooks for data integration of the readership survey with passively measured online media usage.

Because the reporting of total readership will only be as good as the underlying data, it is important to understand the accuracy of respondents' answers about digital reading (survey based behavior). The quality of the data is of course also crucial when the data serves as a fusion hook in data integration projects.

Questions on digital reading have been a part of the Dutch readership survey since 2011. In previous PDRF papers we have shown that readership levels and rankings are generally in line with passively collected online data for print titles (Petric, I. & A. Bassler, PDRF 2013, Petric, I. & A. Bassler, PDRF 2015). In this paper we go a step further, and analyze digital reading within a single source sample: respondents whose online usage is passively measured via software on pc and mobile devices, and who have also filled in the Dutch readership survey questionnaire. This enables us to analyze single source if respondents are able to accurately report on their digital reading behavior. At the PDRF 2015, Pat Pellegrini reported on a similar analysis based on an US sample (Pellegrini 2015). Comparing the findings of our analysis to Pellegrini's findings will give insights into the possibility to formulate general rules about the quality of claimed digital behavior, as guidelines when using those data to report on total readership or as fusion hooks in the data integration project.

NOM, the Dutch Joint Industry Committee responsible for the national readership survey NOM Print Monitor (NPM), has been using the data on digital reading obtained from the NPM questionnaire for both purposes.

In the past few years we have been publishing the NOM Media Brands reports, in which total readership (print and digital claimed readership in the past 12 months) was reported for all the brands of newspapers and magazines included in NPM. These data were used as an indication of total readership in the past 12 months, and were reported as gross readership, net readership - but also print only readership, digital only readership and overlap was reported.

In 2017 NOM started a data integration project of NPM data (print readership) and NOBO data (digital readership of websites and apps) in order to obtain total readership of newspaper and magazine brands. The claimed digital readership from NPM was used as one of the hooks in the fusion process. The first results of this project are expected at the end of 2017.

Evaluation of survey based digital reading

The objective of this paper is to better understand the quality of answers that respondents give when we ask them to report on their digital reading. For that purpose, we compared reach levels from the questionnaire of the Dutch readership survey NPM to passively measured digital reading from the GfK Crossmedia Link panel.

We investigated the following topics:

1. Underestimation of digital readership: how much reading is not reported via the survey?
2. To what degree are respondents able to correctly identify themselves as readers / non-readers?
3. Possible reasons for incorrect answers

The analyses are based on the publication of the readership survey NPM 2017-II (April 2016 – March 2017) and corresponding data from GfK Crossmedia Link. To investigate the validity of survey based digital reading on a respondent level, we used a single source subsample of panelists who had their digital behavior measured passively, and also filled in the readership survey.

Survey based: The Dutch readership survey NOM Print Monitor

The questionnaire starts with a so called “platform filter”, in which respondents indicate on what platform they have been in contact with newspapers and with magazines in the past 12 months (see also Petric, I. & A. Bassler, PDRF 2015).

In displays prior to the readership questions, respondents are informed about the definition of digital reading: “using any device (e.g. computer, smartphone, tablet, e-reader), visiting the website, using an app and reading/looking through an e-paper, at least once in the past 12 months”.

If, in the platform filter, respondents answer that they have used a digital device – pc/laptop, tablet, smartphone, e-reader or other electronic device – to read either newspapers or magazines in the past 12 months, they are routed to the brand filter question for paper AND digital. This is a screen-in question about reading specific brands in the past 12 months: on paper, digitally or both. If they answer in the platform filter that they have used no digital device for reading in the past 12 months, they are routed to the brand filter question for paper only (screen-in question about reading a brand on paper in the past 12 months).

After the brand filter questions, the questionnaire continues for the screened-in paper titles with the Specific Issue Readership questions (this is the basis for AIR) and some additional title questions. After completing the section on paper editions, digital readers move on to the section with additional questions about digital reading on brand level for a selection of 20 brands. Non-digital readers of course skip this section. The questionnaire then deals with other media and socio-demographic characteristics.

More details on the survey design can be found in the paper presented in 2015 (Petric, I. & A. Bassler, PDRF 2015).

Passive measurement: GfK Crossmedia Link

GfK Crossmedia Link is a cross media survey based on a panel that is used (among others) to produce audience figures for online behavior. The panel of 8,000 respondents is representative of the Dutch population 6+. Visits to sites and use of apps on pc, tablet and smartphone are passively measured, using LEOtrace© software from GfK. Sites and apps are coded into brands.

Overlap between NPM and GfK Crossmedia Link

Part of the NPM sample is recruited from the GfK Online Panel, which is also used to recruit panelists for GfK Crossmedia Link. Because of this common source, there is an overlap in respondents for the two surveys, which has been used for the analyses in this paper.

Within the sample of NPM Q2 2016 – Q1 2017 we selected those respondents who were part of the GfK Crossmedia Link panel in the months prior to filling in the NPM questionnaire (n=561).

Table 1. Composition sample NPM / GfK Crossmedia Link

respondent characteristics		
total		561
gender	female	44%
	male	56%
age	13-24	14%
	25-34	24%
	35-49	27%
	50-64	19%
	65+	16%
level of education	low	13%
	medium	46%
	high	40%
internet usage	light	26%
	medium	40%
	heavy	35%

Underestimation of digital reading via questionnaire

In past papers (Petric, I. & A. Bassler, PDRF 2013, Petric, I. & A. Bassler, PDRF 2015) we have shown that the levels of digital readership we find in the questionnaire are an underestimation of the actual digital readership. In the questionnaire, we ask respondent to report if they have read a brand digitally in the past 12 months, in other words, yearly reach. The actual yearly reach as measured passively in GfK Crossmedia Link is five times higher. As in previous comparisons, the reported levels in questionnaire best match with the average monthly reach in passive measurement. For some titles, it is even closer to weekly reach.

Table 2. Comparison of reach levels survey based vs. passive measurement

	NPM (survey)	GfK Cross media Link (passive)		
	past 12 month	year	month (average)	week (average)
All titles	278%	1371%	335%	139%
Newspapers	131%	501%	150%	73%
Magazines	147%	864%	185%	67%

Over- and underclaiming readership

To find out to which degree respondents are able to identify themselves correctly as readers / non-readers of a digital brand, we compared the answers in the NPM survey to the passively measured media usage within the single source sample of respondents who participated both in NPM and GfK Crossmedia Link.

The comparison was made for the 124 titles / brands which can be matched across the two studies. A respondent can give a correct answer for one title, but incorrect for another title. The basis for the evaluation are therefore not respondents, but the (mis)matches between the survey based answers and the passive measurement per title per respondent. This results in almost 70,000 comparisons (124 titles x 561 respondents) which can be used as the cases in the analysis.

Because we already know from the comparison of the reach levels that respondents report back over a limited time frame, we used the passively measured data from the 3 months preceding the questionnaire data. When interpreting the results, we also need to take into account that 'no reach' is the most common occurrence in the data set: it covers 124 brands, while respondents report digital reading for an average of 2.4 brands.

Table 3 shows the crossing of the passively measured findings (reach / no reach in the 3 months prior to filling in the questionnaire) with the answers given in the NPM-questionnaire (reported reach / no reported reach).

- When respondents have not been in contact with a brand, they are quite capable of giving the correct answer. There is very little overclaim (2% for newspaper brands, 1% for magazine brands). We also need to take into account that the analysis is limited to the three months before the questionnaire was filled in and a respondent may have been reading the brand earlier.
- The picture is quite different when respondents have indeed been in contact with a brand. Only 20% of the instances in which newspapers have been digitally read are reported in the questionnaire; for magazines, only 5% is reported. The majority of contacts with the brand is not reported in the questionnaire.

Table 3. Correctness of answers to NPM-survey

	Reach in past 3 months (passive measurement)			Not reached in past 3 months (passive measurement)		
	Reach reported	No reach reported (underclaim)	% correct answers in survey	Reach reported (overclaim)	No reach reported	% correct answers in survey
all titles	537	4.196	11%	817	64.014	99%
newspapers	389	1.602	20%	239	14.025	98%
magazines	148	2.594	5%	578	55.539	99%

Possible reasons for incorrect answers

There are several sorts of reasons for mismatches between survey based and passively measured digital reading.

Definition vs. perception of brands

Passively measuring a brand requires that the brand is defined: which websites and apps make up the brand, do we count the whole website or particular sections etc. This definition will be determined by commercial and technical considerations. These do not necessarily match with the perception a reader has of the brand. Here are a few examples.

While most titles' survey based reach is nearest to the monthly reach that is passively measured, there are several titles that have a much higher survey based reach / relatively high levels of overclaim.

- In the case of Vogue, the questionnaire delivers a much higher result than the passive measurement. We attribute this to the fact that respondents do not limit their answers to the Dutch version of the brand (as it is done in GfK Crossmedia Link), but probably also report contacts with the international digital products.
- The brand Radar+ is a spin-off of a popular consumer tv-program called 'Radar'. The definition of the passively measured brand is limited to the spin-off itself, but it is very likely that respondents are reporting visits to the much larger website of the tv-program as well.

The definition of a brand can also lead to underclaim.

- The Dutch brand Viva has a very popular forum section, which respondents do not seem to include in their answers when asked about reading Viva digitally. Probably the respondents do not consider that to be a part of Viva content.
- Some printed titles do not have corresponding digital entity on the brand level, but are included in a digital product of a broader / overlaying brand. This is e.g. the case for the newspaper brand NRC, which has two separate brands on paper (NRC Handelsblad and NRC next) but is a single brand in the digital sphere (NRC). When respondents are using the app of 'their' newspaper or visiting the website of 'their' newspaper, there will be a mismatch – either resulting in overclaim (reporting reading a non-existing digital brand) or underclaim (not reporting the broader digital brand).
- Measurement of regional newspapers in the questionnaire is limited to a regional selection of the sample. However, the digital consumption can be more widespread, e.g. when people after moving are still interested in the news from their previous home town.

'Reading'

A similar argument can be made for the concept of 'reading'. In the questionnaire, respondents are asked about reading or looking into the digital brand. This concept can differ from the passive measurement. For passive measurement, any contact – however brief and / or unintentional – signifies that the respondent has been reached. And even when the contact with a brand is longer and intentional, respondents may not consider it 'reading' (if e.g. they watch a video on a newspaper website).

Profile of respondents

Can we identify groups of respondents who are more likely to give an incorrect answer in the questionnaire? In table 4 we show the number of digital brands that respondents read (passively measured), the number of brands they report reading in the NPM survey (divided in "correctly" and "overclaim") as well as the number of brands they do not report (underclaim). Overall, respondents read 7.6 digital brands. They report reading 2.4 brands: on average 1 brand is reported correctly, 1.5 brands are overclaimed. 6.6 brands of the passively measured brands are not reported. The more digital brands respondents read, the less likely it is that they correctly claim readership: more reported brands means an increase in overclaim as well as underclaim.

- Women read more digital brands, but they also overclaim more when asked about it.
- Younger people (age 13 – 24) read more digital brands than the rest (age 25+), they also report more reading, but they underclaim a lot more than the rest of the respondents.
- Respondents with high education report the most digital reading and are making more correct claims than respondents with a lower level of education.
- Light readers of the paper editions of newspaper read more digital brands, but they tend to underclaim the most when asked about it. The same goes for light readers of paper editions of magazines.
- Heavy internet users read more digital brands than medium and light internet users, they report the most digital brands, but also overclaim and underclaim the most.
- Respondents who report digital reading of newspapers and magazines at the beginning of the questionnaire (platform filter) are able to report digital reading on a brand level better than the ones who do not report digital reading in general.
- People who claim that they often read digital news sites, actually read more digital brands than others. They report the most digital reading, and their underclaims and overclaims are the lowest.

Table 4. Number of brands reported / read per profile

respondent characteristics (survey based)		brands read (passive measurement)	nr of brands reported in survey			nr of brands not reported in survey (underclaim)
		total	total	correctly claimed	overclaim	
total		7,6	2,4	1,0	1,5	6,6
gender	female	7,8	2,7	1,0	1,7	6,8
	male	7,5	2,3	1,0	1,3	6,5
age	13-24	8,7	3,1	0,8	2,3	7,9
	25-34	8,1	2,0	0,9	1,1	7,2
	35-49	8,4	2,6	1,1	1,5	7,3
	50-64	6,9	2,4	1,1	1,3	5,8
	65+	5,5	2,4	0,9	1,5	4,7
level of education	low	5,5	1,6	0,5	1,1	5,0
	medium	8,0	2,4	0,9	1,5	7,1
	high	7,9	2,8	1,2	1,6	6,7
number of newspapers on paper	light	8,4	2,1	0,8	1,3	7,6
	medium	7,3	2,2	1,0	1,2	6,3
	heavy	7,1	3,0	1,1	1,9	5,9
number of magazines on paper	light	8,0	1,4	0,6	0,7	7,4
	medium	7,2	2,1	0,9	1,1	6,3
	heavy	7,6	3,9	1,3	2,5	6,3
internet usage	light	6,6	1,4	0,6	0,8	6,0
	medium	7,5	2,1	0,9	1,2	6,6
	heavy	8,5	3,6	1,3	2,3	7,2
newsbrands on computer	yes	8,3	5,3	2,0	3,2	6,3
	no	7,3	1,1	0,4	0,6	6,8
newsbrands on smartphone	yes	8,5	4,9	2,0	2,9	6,5
	no	7,3	1,6	0,6	1,0	6,7
newsbrands on tablet	yes	8,4	4,2	1,8	2,4	6,6
	no	7,3	1,8	0,7	1,1	6,7
magazines on computer	yes	8,1	7,3	2,2	4,9	5,9
	no	7,5	1,5	0,7	0,8	6,8
magazines on smartphone	yes	8,7	7,1	2,3	4,8	6,4
	no	7,5	1,8	0,8	1,0	6,7
magazines on tablet	yes	8,1	5,1	1,8	3,3	6,2
	no	7,5	1,9	0,8	1,1	6,7
visits news sites	never / seldom	6,4	1,6	0,5	1,1	5,9
	sometimes	7,2	2,2	0,7	1,4	6,5
	often	8,5	3,0	1,3	1,7	7,1

Conclusion and discussion

In the US analysis of Pellegrini et. al. (Pellegrini 2015), the findings were that respondents consistently underreport their digital behavior and that the degree to which the claims in surveys are correct is related to frequency of use and demographic differences. Our analysis shows that these findings are also true for the Dutch data.

Respondents are generally not able to accurately report on digital reading. Underclaim is the main problem; overclaim is much smaller. Underclaim can be caused by differences in definition; for particular brands this may mean that respondents do not actually make mistakes, but have a different concept in mind.

Which conclusions can we draw about using reported digital behavior from questionnaires? The reported behavior can – in our opinion – be used as an indication of real digital behavior, but we should be aware of limitations. Frequent users of digital brands – who mostly determine the result – give better answers. There are some differences in profile of respondents; some respondents give better answers than the others. This differences should be taken into account when interpreting the results of reported digital reading.

We strongly recommend using reported digital reading as a hook in the fusion of print and digital readership data, as this information will increase the correct allocation of digital readers and non-readers, thereby increasing the quality of a fusion.

References

Pellegrini, P. (PDRF 2015). CROSS PLATFORM MEDIA MEASUREMENT: MOBILE AND DESKTOP ONLINE COMPARISONS

Petric, I. & A. Bassler (PDRF 2013). PRINT PLUS: MEASURING DIGITAL PRINT PLATFORMS

Petric, I. & A. Bassler (PDRF 2015). MEASURING TOTAL READERSHIP – THE DUTCH MODEL