

**GETTING STARTED
MEASURING SOCIAL
MEDIA LITERACY**

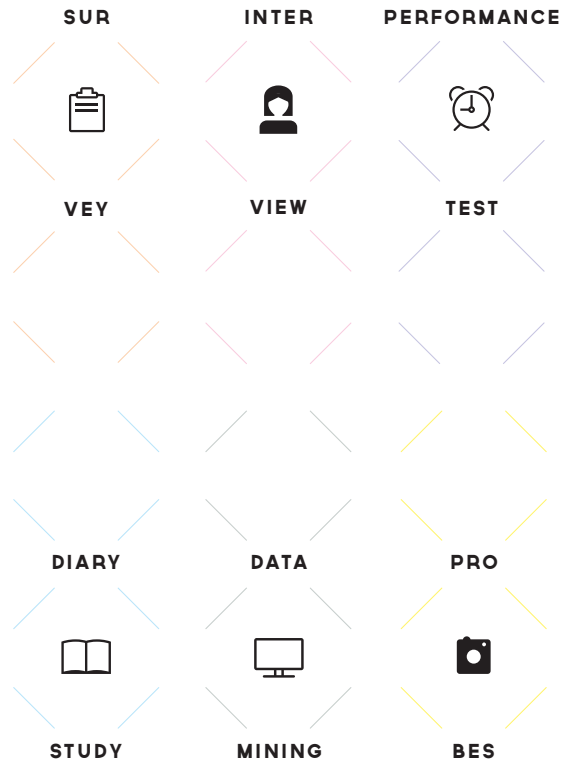


The logo for iWT, consisting of the lowercase letters 'iWT' in a bold, sans-serif font.The logo for iMinds, featuring a stylized 'i' icon followed by the text 'iMinds' in a sans-serif font.The logo for MICT, featuring a stylized 'M' icon followed by the text 'MICT' and 'UNIVERSITEIT GENT' below it.

Hi there!

Welcome to this starter toolkit for measuring social media literacy. The impact of social media on people's everyday life is only going to get bigger. This makes measuring how people deal with and use these media increasingly important. With this toolkit, we have created an overview of possible ways for measuring social media literacy. You can find more information about how the toolkit works on the flip side of this card. We hope this toolkit will be helpful as well as inspirational for you, your colleagues and your friends.

**Hadewijch Vanwynsberghe
& Louise Haspeslagh**

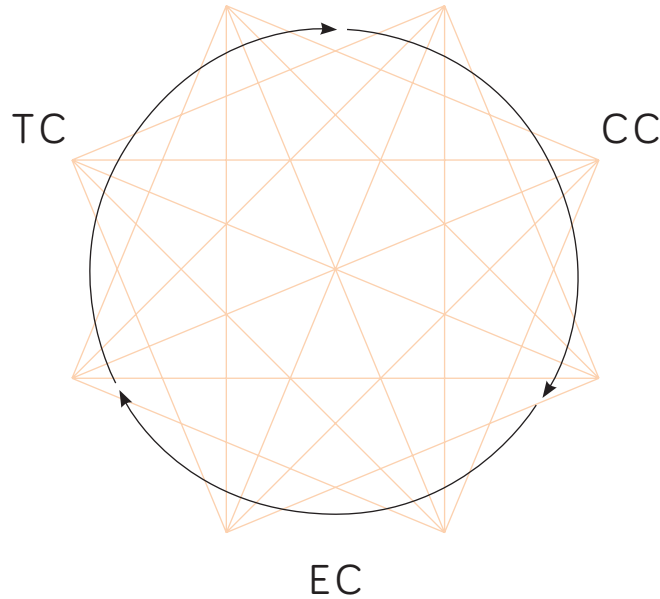


The cards in this toolkit provide information on different methods for measuring social media literacy. As an introduction to the concept, a model of social media literacy and its different underlying emotional, cognitive and technical competencies, is drawn out on the next card. Thereafter you can find an overview of the methods, which should make it easier for you to make a first selection based on the size of your sample and the competencies you are interested in. The following cards then provide more information on the methods.

Each of these method cards contains general information on the front side about the method in question and some advantages and disadvantages. On the reverse is an example of how to apply that method to studying social media literacy. A literature overview is provided, followed by a list of (non-exhaustive) questions and indicators for Facebook and Twitter, two of the most popular social media sites. These questions are mainly intended to serve as examples and should be adapted to the specific platform, research question and sample of respondents. Some of the methods were tested within EMSOC: survey, interview, performance test and the diary method. Others (probing and data mining) were not. For these last methods, the indicators provided on the cards are purely illustrative.

The toolkit contains information on six methods, but it is not necessarily exhaustive. It is not a static set of cards but a living tool, open to changes, suggestions and additions. An empty card is added at the end to encourage the addition of methods to the toolkit. Any feedback on the cards, shortcomings or suggestions for extra methods are very welcome on the EMSOC website (www.emsoc.be/toolkit).

BUILDING BLOCKS OF SOCIAL MEDIA LITERACY



TECHNICAL COMPETENCIES (TC)

Theoretical and practical knowledge and the conversion of this knowledge into the skills needed to operate social media tools and applications.

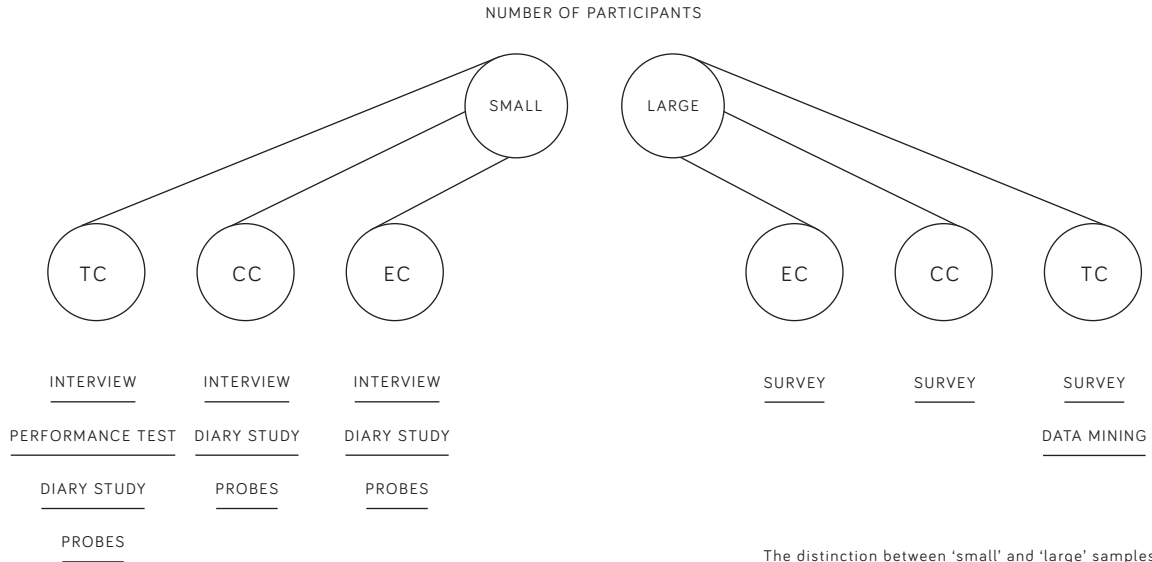
COGNITIVE COMPETENCIES (CC)

The capacity to analyze and evaluate social media content. Analyzing means questioning of, interpreting of, reflecting on and understanding of the social, cultural, political, economic and historical context in which social media content (also your own content) is created and communicated. This knowledge can then be used to evaluate or decide whether content is relevant, important, biased, realistic, trustworthy or true.

EMOTIONAL COMPETENCIES (EC)

Emotional disposition to social media and your own or others' actions on these media.

METHODS FOR SOCIAL MEDIA LITERACY RESEARCH



The distinction between 'small' and 'large' samples in this scheme is rather arbitrary and indicative in nature. On the different method cards, the ideal sample size is also indicated by S (5-20), M (21-50), L (51-100) and XL (>100). Keep in mind that this number is intended only as an indication and should not be seen as an absolute number of respondents.

DESCRIPTION A survey is a method for collecting numerical data about a certain topic in the population. A survey exists as a predefined set of questions that is given to a sample of people. By means of a survey, researchers can ask factual questions (e.g. age, gender, education level), but it can also be used to collect information about people's opinions, feelings, attitudes, past behaviours and competencies. However, most of the survey questions are self-reported, which means people can claim greater competencies than they actually have. There are three main ways to conduct survey research: using an offline questionnaire with pencil and paper, an online questionnaire (through mail or other online communication channels) or a structured survey interview. The survey method does not require a high level of engagement by participants, making it possible to ask a large sample of people a lot of questions in a short time.



NUMBER OF PARTICIPANTS

L (51-100)
XL (>100)



PARTICIPANTS ENGAGEMENT

low engagement



POSITIVE

- It is possible to ask a lot of questions in a short time.
- The survey method make it possible to collect large samples of data.
- If the sample is representative, it is possible to generalize the findings for a population group.

NEGATIVE

- Self-report questionnaires have problems of validity.
- The retrospective nature of surveys may cause events or experiences to be minimized, forgotten or distorted.



IN WHAT FOLLOWS ... Surveys can touch upon all competencies—technical, cognitive and emotional. On the following cards, we will discuss these different competencies, starting with three questions for measuring technical competencies: familiarity, frequency and self-efficacy questions. The next card provides information on cognitive competencies by elaborating on critical thinking and trust questions. Finally, we discuss emotional competencies as measured by attitude questions.



TIPS AND TRICKS FOR YOUR OWN SURVEY

Through evaluating different methods within EMSOC, we are able to indicate which survey questions are better suited for measuring social media literacy than others. Depending on the space provided for the survey, researchers should make sure to include at least the best proxies in their survey. Those questions that score poorer (but still provide useful information) can be eliminated in shorter surveys. For technical competencies, the familiarity question gives the best indication of actual competencies, followed by self-efficacy first and frequency next. For measuring cognitive competencies, we advise to use the two trust questions (toward social media sites and toward their users). Lastly, for emotional competencies, the attitude toward social media sites as companies can be used if there is little space. If more space is available, you can gain deeper insights by using the question on attitude toward how these sites operate and the question on attitude toward how friends use the sites. Researchers should however keep in mind that they better use additional qualitative methods to have a full understanding of people's social media competencies.

LITERATURE REVIEW TECHNICAL COMPETENCIES : SELF-EFFICACY For measuring media literacy, most of the existing literature relies on self-evaluation of knowledge and skills, often referred to as self-efficacy. Since research on self-efficacy indicates that people with a higher belief in their own skills and knowledge are more likely to use the Internet and to complete online tasks more successfully, self-efficacy is widely used for measuring people's media literacy. Based on Eastin and LaRose (2000), Livingstone and Helsper (2010) measure Internet literacy by asking respondents about which online activities they are good at (e.g. finding information online, setting up an email account), and by asking on a four-point scale (beginner-expert) how respondents rate their online skills. However, one criticism is that self-perceived competencies do not measure users' actual media literacy; self-perceived competencies are always context-dependent. Talja (2005) notes that an individual's perception of his/her competencies depends on whom they compare themselves with, how one is feeling or who is present in the same room when completing the questionnaire. Another criticism is that due to sufficient experience with a certain technology, self-efficacy loses its influence on use of that technology, as most people would feel proficient in using it. But survey self-efficacy measures for media literacy may not be completely degraded; van Deursen (2010) found that self-evaluation survey measures can be used as a proxy for actual skills.



FACEBOOK

How good are you at performing the following activities?
(1 = not good at all - 5 = very good) ^A

- Changing privacy settings
- Removing content from the timeline
- Using groups
- Customizing what data apps or applications can collect about you
- Sharing
- Uploading photos
- Giving a reaction (in text form)
- Tagging



TWITTER

How good are you at performing the following activities?
(1 = not good at all - 5 = very good) ^A

- Adding an image to a tweet
- Adding tweets to favorites
- Giving a response to the tweets of others (via @replies)
- Addressing a tweet to someone via @ mentions
- Unfollowing someone
- Spreading a tweet of others through retweets
- Using hashtags
- Removing your own tweets



LITERATURE REVIEW TECHNICAL COMPETENCIES : FREQUENCY Researchers also use indirect measures of people's media literacy such as number of activities people have ever performed and frequency of use. Eurostat, for example, asks its respondents whether they have ever performed certain Internet activities, such as using a search engine to find information, sending an email with attachment or posting messages. Respondents who have already carried out the most activities are deemed to have the highest level of media literacy. One criticism of this measure is that the activities are not clearly defined (cf. what is posting messages?). However, Howard, Rainie, and Jones (2001) indicate that people with the longest (cf. how long have you been using the Internet?) and most frequent use of the Internet (cf. how frequently do you log on from home?) benefit most from their Internet use. Van Deursen (2010) criticises these use questions for actual media literacy, indicating that these measures are poor indicators as they do not measure actual media literacy but rather media use. However, his research did show that frequency is best suited as a proxy for actual Internet skills.



FACEBOOK

How often do you do the following activities?
(1 = never – 5 = several times a day) ^{A B}

- Changing privacy settings
- Removing content from the timeline
- Using groups
- Customizing what data apps or applications can collect about you
- Sharing
- Uploading photos
- Giving a reaction (in text form)
- Tagging



TWITTER

How often do you do the following activities?
(1 = never – 5 = several times a day) ^{A B}

- Adding an image to a tweet
- Adding tweets to favorites
- Giving a response to the tweet of others (via @ replies)
- Addressing a tweet to someone via @ mentions
- Unfollowing someone
- Spreading someone else's tweet through retweets
- Using hashtags
- Removing your own tweets



LITERATURE REVIEW TECHNICAL COMPETENCIES : FAMILIARITY Familiarity (with terms) questions are another conventional way of measuring media literacy. Based on performance tests, Hargittai (2005) found that asking people about their understanding of different computer- and Internet-related terms is a stronger predictor of people's digital literacy than measures of self-efficacy or frequency of use. Hargittai (2009) queried respondents' familiarity with computer- and Internet-related terms such as JPEG, preference settings, PDF, refresh/reload, spyware, bcc, wiki and torrent. To test whether respondents simply check off items in a haphazard manner, Hargittai (2009) includes three bogus items in the list that have strong similarities with real terms: proxypod, JFW and filtibly. A majority of respondents notice that there are bogus items, which means that in follow-up studies we can rely on the formerly proposed instrument without bogus items. Despite the positive outcomes from use of familiarity questions, they have recently been rather underused.



FACEBOOK

How familiar are you with the following Facebook-related items?
(1 = no understanding - 5 = full understanding) ^A

- Tagging
- Privacy settings
- Sharing
- Advertisement
- Apps
- Groups
- Reactions
- Uploading
- Events
- Likes



TWITTER

How familiar are you with the following Twitter-related items?
(1 = no understanding - 5 = full understanding) ^A

- Hashtag
- Hootsuite
- MT
- Follower
- Bot
- @ mention
- RT
- #dtv
- Tweets
- Unfollowing
- Tweeps

LITERATURE REVIEW EMOTIONAL COMPETENCIES : ATTITUDE An often-used measurement of attitudes towards technology is that of Bruner, James and Hensel (2001). This measure contains an established seven-item, five-point semantic differential scale (bad/good, foolish/clever, unpleasant/pleasant, useless/useful, boring/interesting and negative/positive). Yang & Yoo (2004) based their measurements on Crites, Fabrigar & Petty (1994) and Davis (1989) to make a thoughtful combination of three affective attitudinal items—happy/annoyed, positive/negative and good/bad—and three cognitive attitudinal items—wise/foolish, beneficial/harmful and valuable/worthless. We based our selection of attitude question items on Bruner's ideas and derived some extra items from his scale. On top of this attitude question, some questions from the cognitive competencies card may also give us insight into users' emotional competencies: the attitude towards Facebook/Twitter question and the attitude towards Facebook friends/Twitter users question.



FACEBOOK

Attitudes: Facebook is ... (1-5) ^A

- useless/useful
- boring/interesting
- negative/positive
- unnecessary/necessary
- untrustworthy/trustworthy
- unfair/fair
- does not respect my privacy/respects my privacy
- does not take into account what I want/takes into account what I want



TWITTER

Attitudes: Twitter is ... (1-5) ^A

- useless/useful
- boring/interesting
- negative/positive
- unnecessary/necessary
- untrustworthy/trustworthy
- unfair/fair
- does not respect my privacy/respects my privacy
- does not take into account what I want/takes into account what I want



LITERATURE REVIEW COGNITIVE COMPETENCIES : CRITICAL THINKING AND TRUST For measuring people's cognitive competencies or critical thinking for online behaviour, Hargittai et al. (2010) use trust measures in which respondents have to indicate the importance of various factors in deciding to visit a website (e.g. knowing who owns the website), the frequency with which they engage in various actions when looking for information (e.g. checking if information is current) and the frequency with which they visit the 'about us' page on a website. One criticism here is that these measures are often limited to information searching (cf. information literacy) and tell us nothing about critical thinking when communicating and creating content through media technologies, which is crucial to social media use. In addition, the trust measure of Hargittai et al. (2010) focuses mainly on trust placed in the owners/authors of a website while neglecting trust in other users, an aspect which is even more important in the case of social media. Dwyer et al. (2013) indicate that it is better to measure people's attitudes than to ask directly about trust/distrust. This attitude is determined by the level of knowledge a user has about the social media platform and its users (McKnight & Chervany, 2006). Combining knowledge and attitude questions, we propose the indicators below. Based on Hargittai's questions about what people find important when visiting websites, we also asked respondents more directly what they do or do not think about while using social media sites.



FACEBOOK ...

Which of these aspects do you think about when you are using Facebook? (Yes/No)

- Which of your Facebook friends can see your personal information (e.g. age, gender, school name, relationships)
- Which of your Facebook friends can see your user data (e.g. text messages, photos, movies)
- Your language on Facebook
- The context of text messages, photos or movies of Facebook friends
- Why Facebook friends post text messages, photos or movies
- How Facebook uses information about you to make profit
- For whom text messages, photos or movies of Facebook friends are intended



TWITTER ...

Which of these aspects do you think about when you are using Twitter? (Yes/No)

- Who can see your personal information (e.g. age, gender, school name, relation) on Twitter
- Who can see your user data (e.g. text messages, photos, movies) on Twitter
- Your language on Twitter
- How Twitter uses information about you to make a profit



... FACEBOOK

Which of the following activities do you think Facebook does?

(Yes/No) Do you mind if Facebook does these things?

(1 = I do mind - 5 = I do not mind at all) ^{A C}

- Keeping deleted data
- Selling personal information of users
- Selling user data
- Adapting advertisements based on visits that users have made to other websites
- Saving user data
- Taking over the copyright of users' posts on Facebook
- Using your name for advertising in the newsfeed of friends
- Storing the personal information of users



Which of the following activities do you think Facebook friends do?

(Yes/No) Do you mind if your Facebook friends do these things?

(1= I do mind - 5 = I do not mind at all) ^{A C}

- Acting differently than they actually are
- Posting text messages, pictures or movies about people who do not have a Facebook account
- Hacking the accounts of other Facebook users
- Doing things on Facebook that can hurt others
- Posting or sharing useless messages or pictures
- Not removing content when it is requested by other users
- Sharing unique creations of others, without mentioning the author
- Sending invitations for applications and games
- Saving data or text messages, photos or videos of other users

... TWITTER

Which of the following activities do you think Twitter does?

(Yes/No) Do you mind if Twitter does these things?

(1 = I do mind - 5 = I do not mind at all) ^{A C}

- Storing the personal information of users
- Keeping deleted data
- Selling user data
- Saving user data
- Selling personal information of users
- Displaying sponsored tweets, trends and tweeps

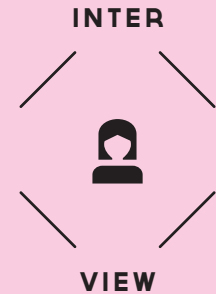
Which of the following activities do you think other Twitter users do? (Yes/No) Do you mind if other Twitter users do

these things? (1 = I do mind - 5 = I do not mind at all) ^{A C}

- Acting differently than they actually are
- Posting tweets about people who do not have a Twitter account
- Saving data or tweets of other users
- Hacking the accounts of other Twitter users
- Tweeting or retweeting useless messages or pictures
- Retweeting unique content of others
- Posting tweets that can hurt others



DESCRIPTION In an interview, the interviewer asks questions to the interviewee, either in a face-to-face interview or telephone interview. A topic list includes themes or questions that an interviewer must address. How and when these questions are asked depends mainly on what the interviewee says. The interviewer can also ask follow-up questions, which makes interviews far more personal than surveys. Interviews provide the possibility of pursuing things in greater depth and contextualising the answers to achieve a holistic understanding of the interviewee's point of view, or to explore interesting areas for further investigation. It is neither necessary nor desirable to select a randomized statistically representative sample for interviews. The interviewees are selected on the basis of who is best at answering questions about a certain topic, usually based on a purposeful sampling procedure. The researcher may also be interested in the interplay between the ideas of a group of people in which case a focus group interview is the ideal method.



NUMBER OF PARTICIPANTS

S (5-20)
M (21-50)



PARTICIPANTS ENGAGEMENT

high engagement



POSITIVE

- During interviews, answers can be motivated and context can be provided by the interviewee.
- Insights can be gained from the body language of the respondents.
- Researchers have the opportunity to probe.
- In focus groups, participants can feed off each other's ideas, producing rich data.

NEGATIVE

- Much depends on the interviewer or researcher's (body) language and presentation.
- Interviews sacrifice the advantages of surveys in terms of number, diversity and representativeness of the population.
- The retrospective nature of interviews may cause events or experiences to be minimized, forgotten or distorted.
- In focus groups, peer influence on each other's responses may be problematic.



LITERATURE REVIEW Researchers who have made use of in-depth interviews to gain insight into people's social media behaviour include, for example, Livingstone (2008) and boyd (2008). Through interviews, Livingstone (2008) explored how teenagers behave on social networking sites. She conducted a series of 16 open-ended interviews with teenagers in their homes and addressed the following topics: (1) the choices, motivations and literacies shaping teenagers' use of social networking sites, (2) how they analyze and interpret others' profiles and (3) their online and offline relationships with friends. Boyd (2008) also made use of in-depth interviews to gain insights into why youth ♥ the social network site MySpace. She explores how teenagers give meaning to profile creation, identity performance and privacy on MySpace. In their focus group study of teenagers' perceptions and awareness of digital technology, Hundley & Shyles (2010) asked about participants' (desired) possession of digital technologies, their familiarity with these technologies, what they do with them and how much time they spend using them. Specifically in respect of social network sites, the moderator asked the group about activities teenagers perform, how many 'friends' they have and how they control information on these sites. The example topics below are based on the combined ideas of these three researchers.



FACEBOOK

Interviewers must address the following topics:

- The choices, attitudes, motivations and technical and cognitive competencies shaping participants' use of Facebook (e.g. how do people feel about tagging friends in a photo or being tagged themselves?)
- The factors that can influence participants' choices, attitudes, motivations and technical and cognitive competencies to use Facebook inside and outside the home (i.e. in what context do people prefer to use Facebook?)
- The reactions of participants to these factors and the impact of these factors



TWITTER

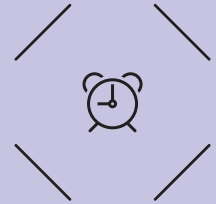
Interviewers must address the following topics:

- The choices, attitudes, motivations and technical and cognitive competencies shaping participants' use of Twitter (e.g. how do people feel about mentioning people in tweets or being mentioned?)
- The factors that can influence participants' choices, attitudes, motivations and technical and cognitive competencies to use Twitter inside and outside the home (i.e. in what context do people prefer to use Twitter?)
- The reactions of participants to these factors and the impact of these factors



DESCRIPTION In performance tests, respondents are provided with tasks to be completed. Their performance on these tasks is measured by observing their behaviour during the tasks. This method is therefore also framed as an observational method and provides a realistic view on respondents' actual competencies. To evaluate how well people have performed on a task, existing research looks at whether the task was completed successfully (cf. effectiveness) and at the amount of time people spent on a task (cf. efficiency). To reduce the impact of environment and provide equal opportunities to each participant, performance tests often happen in a kind of lab setting. This setting may however reduce the amount of relevant contextual information. Another criticism is that the presence of the researcher during the test can bias respondents' performances.

PERFORMANCE



TEST

NUMBER OF PARTICIPANTS

S (5-20)
M (21-50)
L (51-100)



PARTICIPANTS ENGAGEMENT

high engagement



POSITIVE

- Performance tests provide a realistic view of people's competencies.
- Performance tests, depending on the setting (not always true for a lab setting), also provide insights into body language and contextual information (e.g. where in the home social media are used).

NEGATIVE

- Performance tests are very laborious for both the researcher and for the respondent.
- Because they are time- and budget-consuming, they can only be used for smaller groups of respondents.
- In performance tests, respondents' behaviour can be influenced by the presence of the researcher or other people in the environment.



LITERATURE REVIEW The performance test seems to be one of the most suitable methods for the direct measurement of actual media literacy. Two leading researchers in this area are Hargittai (2005) and van Deursen (2010). Hargittai made use of performance tests to ask about 100 randomly selected web users to complete eight tasks—for example, looking for information on job or career opportunities or tax forms. Van Deursen used performance tests to study Internet skills. He conducted performance tests in three different contexts, in each of which the participants had to conduct different operational, formal, information and strategic tasks. A criticism of both uses of performance tests is that they were conducted in a strict lab setting, causing information loss about the context of use. In addition, both studies neglected the choices and motivations of people to perform the tasks in a particular way. To address these comments, we conducted the performance tests in an environment where the participants felt at ease (cf. home), providing an opportunity to probe what they think and/or feel while performing the activity and to dig deeper into the participants' critical competencies.



FACEBOOK

- Go to the Facebook website
- Sign in with a fake account
- Search the terms of use of Facebook
- Fill in your profile information
- Customize your privacy settings
- Make your last action invisible on your timeline
- Go to your activity logbook, remove your last activity
- Block the following app ‘...’
- Insert a YouTube movie on your profile page
- Share the YouTube video with every one of your Facebook friends/one person
- Create an event, with the intention to invite people to your home
- Create a group, for a limited number of friends
- Ensure that others cannot see what advertisements you like
- Delete the fake account

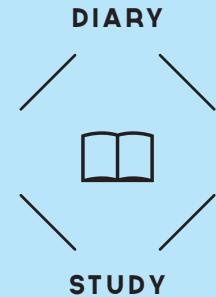


TWITTER

- Go to the Twitter website
- Sign in with a fake account
- Search the terms of use of Twitter
- Fill in your biography
- Customize your privacy settings
- Share a link from a news website through Twitter
- Read all recent tweets with #...
- Post a private message
- Post a tweet
- Remove the tweet
- Add an image to a tweet
- Give a response to the tweet of others (via @ replies)
- Address a tweet to someone via @ mentions
- Follow someone
- Unfollow someone
- Spread a tweet by someone else through retweets



DESCRIPTION In the diary method, participants are asked to record daily activities or experiences as they occur, on a paper diary or in an online diary (cf. in the form of an online questionnaire with many open fields). These diaries can be structured, with predefined questions, or unstructured, with one question and many open spaces. The diary method helps participants to accurately reflect on their experiences. In retrospective surveys or interviews, the experiences may be minimised over time and consequently seen as insignificant (Bolger, Davis, & Rafaeli, 2003). In addition, the diary method helps to accurately assess the frequency of daily experiences because after a while the similarity and mundane nature of daily activities makes this difficult. Hence, the diary method can raise issues that did not emerge in surveys, interviews or performance tests because participants forgot about them, or because we as researchers did not ask about them.

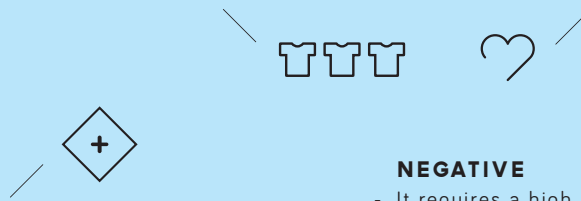


NUMBER OF PARTICIPANTS

- S (5-20)
- M (21-50)
- L (51-100)

PARTICIPANTS ENGAGEMENT

high engagement

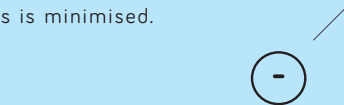


POSITIVE

- The diary method helps participants to remember the ways they spend their time.
- Researchers have control over the questions and can ask follow-up questions or give new instructions the next day.
- Participants are encouraged to give more information about some issues.
- The influence of the researcher on the participants is minimised.

NEGATIVE

- It requires a high level of participants' commitment in order to achieve reliable and valid data.
- It is difficult to convince participants that they also have to record seemingly mundane and low-level activities.
- It interrupts the natural flow of an activity.
- The lack of many leading questions means that participants are sometimes uncertain about what to report.
- Habituation, and more specifically the development of a habitual response style when making diary entries, may have some deleterious effects.



LITERATURE REVIEW Despite the many advantages of the diary method for measuring people's media literacy, very few studies have made use of this method. Ladbroke and Probert (2011) utilised the diary method to gain insights into adolescents' information skills and critical literacy when searching for information online. The students had to respond every day for 14 days to the following questions: What did you read? Why did you go to this? What did you find out? How long did you do this for? How did you feel while you were doing this? Our criticism on Ladbroke and Probert's use of the diary method is that they did not take account of the fact that people do not always search for information online because information sometimes automatically comes to people. In addition, not all information online can be 'read' (cf. reading a text); information online may also occur as visuals. Granted these criticisms, the diary method can still serve as a valuable method of measuring social media literacy.



FACEBOOK

- Duration of your Facebook visit ... actively and ... passively
- On Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, I have done the following : ...
- In the following circumstance/context (e.g. during class, on a break at work ...
- Because ...
- I was thinking about ... before/during and/ or after the activity
- I felt (e.g. positive, happy, angry) ... after the activity
- Because ...

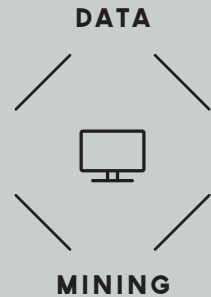


TWITTER

- Duration of your Twitter visit ... actively and ... passively
- On Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, I have done the following : ...
- In the following circumstance/context (e.g. during class, on a break at work ...
- Because ...
- I was thinking about ... before/during and/ or after the activity
- I felt (e.g. positive, happy, angry) ... after the activity
- Because ...



DESCRIPTION The rise of the Internet and of social media sites has generated a lot of data about user behaviour that could be used for research on (social) media literacy. This data is stored through cookies and log files by almost all websites. The collection of this data can be achieved by means of Application Program Interfaces (APIs). The collected data can contain all sorts of user information (e.g. tags, time of upload, number of comments). They can also be helpful in recruiting respondents with specific profiles by categorizing them on the basis of this user data. Most major platforms, such as Google or Twitter, offer detailed documentation about their APIs. Data collection through APIs is inherently nonintrusive, as it does not require direct interaction with platform users. The data collection happens instantaneously and can be repeated as often as required. When used in combination with interviews, focus groups, or other methods, data mining fits into a netnography approach, which uses online communications for the ethnographic understanding of human behaviour.



NUMBER OF PARTICIPANTS

- S (5-20)
- M (21-50)
- L (51-100)
- XL (>100)



PARTICIPANTS ENGAGEMENT

low engagement



POSITIVE

- Data mining is unobtrusive.
- The data can be collected instantaneously and repeatedly.
- A lot of data can be collected quickly and cheaply.
- Access to contents and recorded interaction data is easy, and allows storage in a dedicated research database.
- Big data retrieved through data mining can easily be combined with data from other research methods (e.g. survey).

NEGATIVE

- Representativeness of the sample may be problematic.
- Researchers have little or no insight into the possible sampling and selection mechanism of the API.
- The blurred distinction between public and private spaces on the Internet raises ethical issues concerning the use of data mining techniques.
- Data mining requires the researcher to have a specific skill set.



LITERATURE REVIEW Social media offer unlimited access to authentic, relevant and detailed consumer-to-consumer communication. The use of this information can yield deep insights into users' experiences. In his study on vloggers, Snelson (2013) could freely access information about the number of views each video attracted, and the number of likes, comments and dislikes. Demographic information such as age and gender was also publicly available on users' YouTube profiles. Snelson also looked at the context in which the videos were recorded, the content of the vlogs, patterns of speech or behaviour and motivations for vlogging. All this information could be obtained in an unobtrusive, naturalistic and cheap way. D'Heer, Verdegem and Mechant (2013) gathered all tweets with the hashtag #vk2012 during a predefined time period, using the YourTwapperKeeper application. This way, they were able to look for links between social and mass media in order to gain an exploratory understanding of possible interplay between media agendas, political agendas and public opinion. Although these studies resulted in some interesting conclusions about social media behaviour, the use of data mining techniques for research on (social) media literacy is sparse if not nonexistent.



FACEBOOK

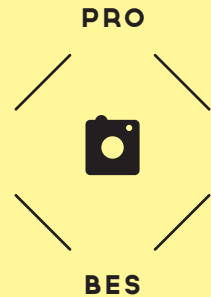
- What kind of content does the person post most often?
- When does the person most often post content?
- How many times per week does the person post this kind of content?
- How many times per day does the person like content?
- How many times per month does the person share content?



TWITTER

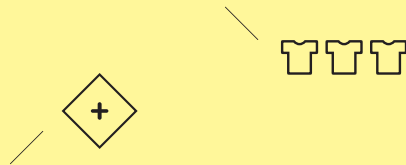
- What kind of tweets does the person post most often?
- When does the person most often tweet?
- How many times per week does the person post tweets?
- How many times per day does the person favorite tweets?
- How many times per month does the person retweet other user's tweets?

DESCRIPTION Probes are design-oriented user research instruments, often in the form of boxes, that study user experiences in their natural context. They are based on self-documentation and invite respondents to reflect on and verbalize their experiences, feelings and attitudes. Probing boxes can be used to inform researchers and to establish a conversation between users and researchers. They may consist of cameras, maps, photo album, diaries, pens and other creative artefacts. The boxes contain open-ended and ambiguous tasks (e.g. photographing and answering questions on illustrated postcards) with the purpose of exploring ideas about new possibilities rather than revisiting needs and desires that are already clearly established and understood. Respondents carry out the tasks and return their completed probes to the researchers, physically or virtually.



NUMBER OF PARTICIPANTS

S (5-20)
M (21-50)



PARTICIPANTS ENGAGEMENT

very high engagement



POSITIVE

- Experiences are studied in their natural context.
- Probes can establish a conversation between user and researcher.
- Probes can uncover new ideas and unknown desires or concerns, as well as inspiring users and researchers.
- Users tend to find the tasks pleasing.
- Results may yield holistic perspectives and vivid information on individuals and their contexts.

NEGATIVE

- The openness of the tasks makes the quality of the results uncertain and may lead respondents in unexpected directions.
- Users may be unsure what the researcher is looking for and consequently feel uncertain about some of the tasks.
- A lot depends on the motivation and deliberation of respondents.
- Completing the tasks is time-consuming.
- Creating the probing box is time-consuming.



LITERATURE REVIEW In their research on alternative media channels for urban youth, All, Coorevits and Schuurman (2013) used probes to map the needs and activities of young people on social media. They gave seven young people daily tasks over a period of seven days, including gathering information, applying for a job, sharing experiences and buying items. This way, probes can uncover previously unknown thoughts and concerns. In respect of social media literacy, probes can be used to assign specific social media tasks to respondents, in which they would have to document their thoughts and feelings using cameras, drawings or pictures. Tasks might also include generating content, such as a short movie clip or a photo, to post later on a social media site. In this way, researchers can gain insights into respondents' thoughts and considerations while performing certain tasks. Probes give participants the freedom to openly discuss, draw or write down their feelings. Within the field of social media literacy research, however—despite their high potential—probes are underutilized.



FACEBOOK

- Make a video about your day and post it on your Facebook profile. Write down your thoughts and feelings on the instruction card
- Make a pen-and-paper drawing of how you think you come across on your Facebook profile
- Write down your thoughts while scrolling your Facebook newsfeed
- Write down the most annoying posts you see today and explain why you picked them
- Draw your ideal profile picture. Write down your thoughts and feelings on the instruction card
- Using pen and paper, draw pictures you would never post on Facebook yourself. Point out the features that should bother you most



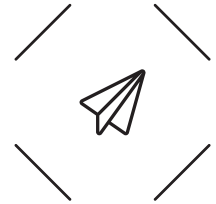
TWITTER

- Make a video about your day and attach the link to a tweet about it. Write down your thoughts and feelings on the instruction card
- Make a pen-and-paper drawing of how you think you come across on your Twitter profile
- Write down your thoughts while scrolling your Twitter feed
- Write down the most annoying tweets you see today and explain why you picked them
- Draw your ideal profile picture. Write down your thoughts and feelings on the instruction card



DESCRIPTION

YOUR



METHOD

NUMBER OF PARTICIPANTS



PARTICIPANTS ENGAGEMENT



POSITIVE



NEGATIVE



This empty card is to encourage additional methods to be added to the toolkit, but you can also upload your own ideas online through the EMSOC website. Any feedback on the cards, shortcomings or suggestions for extra methods are very welcome.

LITERATURE REVIEW



FACEBOOK



TWITTER



REFERENCES

SURVEY

- Allen, I. E., & Seaman, C. A. (2007). Likert scales and data analyses. *Quality Progress*, 40(7), 64-65.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Barker, V. (2009). Older adolescents' motivations for social network site use: the influence of gender, group identity, and collective self-esteem. *CyberPsychology & Behaviour*, 12(2), 209-213.
- Bruner, G. C., Hensel, P. J., & James, K. E. (2001). *Marketing scales handbook*. Chicago: American Marketing Association.
- Chau, P. Y., & Hu, P. J. H. (2001). Information technology acceptance by individual professionals: A model comparison approach. *Decision Sciences*, 32(4), 699-719.
- Dwyer, N., Basu, A., & Marsh, S. (2013). Reflections on measuring the trust empowerment potential of a digital environment. *IFIP Advances in Information and Communication Technology*, 401, 127-135.
- Eastin, M., & LaRose, R. (2000). Internet self-efficacy and the psychology of the digital divide. *Journal of Computer-Mediated Communication*, 6(1). Retrieved September 2014 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.2000.tb00110.x/full>
- Hakkarainen, K., Ilomaki, L., Lipponen, L., Muukkonen, H., Rahikainen, M., Tuominen, T., & Lehtinen, E. (2000). Students' skills and practices of using ICT: Results of a national assessment in Finland. *Computers & Education*, 34(2), 103-117.
- Hargittai, E. (2005). Survey measures of web-oriented digital literacy. *Social Science Computer Review*, 23(3), 371-379.
- Hargittai, E. (2009). An update on survey measures of web-oriented digital literacy. *Social Science Computer Review*, 27(1), 130-137.
- Hargittai, E., & Shafer, S. (2006). Differences in actual and perceived online skills: The role of gender. *Social Science Quarterly*, 87(2), 432-448.
- Hargittai, E., Fullerton, L., Menchen-Trevino, E., & Thomas, K. Y. (2010). Trust online: Young adults' evaluation of web content. *International Journal of Communication*, 4, 468-494.
- Howard, P. E. N., Rainie, L., & Jones, S. (2001). Days and night on the Internet: The impact of a diffusing technology. *American Behavioral Scientist*, 45(3), 383-404.
- Hundley, H. L., & Shyles, L. (2010). US teenagers' perceptions and awareness of digital technology: A focus group approach. *New media & society*.
- Kuhlemeier, H., & Hemker, B. (2007). The impact of computer use at home on students' Internet skills. *Computer & Education*, 49(2), 460-480.
- Lehmann, D. R., & Hulbert, J. (1972). Are three-point scales always good enough? *Journal of Marketing Research*, 444-446.
- Livingstone, S., & Helsper, E. (2010). Balancing opportunities and risks in teenagers' use of the Internet: The role of online skills and Internet self-efficacy. *New Media & Society*, 12(2), 309-329.
- McKnight, D. H., & Chervany, N. L. (2006). Reflections on an initial trust-building model. In R. Bachmann & A. Zaheer, (Eds.), *Handbook of trust research* (pp. 29-51). Cheltenham, UK: Edward Elgar Publishing.
- Merrit, K., Smith, K. D., & Renzo, J. C. D. (2005). An investigation on self-reported computer literacy: Is it reliable? *Issues in Information Systems*, 6(1), 289-295.
- Ofcom. (2004). *Strategy and priorities for the promotion of media literacy: a statement*.
- Quandt, T. (2012). What's left of trust in a network society? An evolutionary model and critical discussion of trust and societal communication. *European journal of communication*, 27(1), 7-21.
- Quan-Haase, A., & Young, A. L. (2010). Uses and gratification of social media: A comparison of Facebook and Instant Messaging. *Bulletin of Science, Technology & Society*, 30(5), 350-361.
- Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism: Evidence for its incidence, nature, and psychological impact from three daily diary studies. *Journal of Social Issues*, 57(1), 31-53.
- Talboom, S., & Pierson, J. (2013). Understanding trust within online discussion boards: Trust formation in the absence of reputation systems. *IFIP Advances in Information and Communication Technology*, 401, 83-99.
- Talja S (2005) The social and discursive construction of computing skills. *Journal of the American Society for Information Science and Technology*, 56(1), 13-22.
- van Deursen, A. J. (2010). Internet Skills: vital assets in an information society. *Gildeprint*.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: toward a conceptual model of utilization. *MIS quarterly*, 125-143.
- Torkzadeh, G., & Van Dyke, T. (2002). Effects of training on Internet self-efficacy and computer user attitudes. *Computers in Human Behaviour*, 18(5), 179-494.
- Van Deursen, A. (2010). Internet skills. Vital assets in an information society. University of Twente, Enschede.
- Yang, H. D., & Yoo, Y. (2004). It's all about attitude: revisiting the technology acceptance model. *Decision Support Systems*, 38(1), 19-31.
- Yu, C. S. (2012). Factors affecting individuals to adopt mobile banking: empirical evidence from the UTAUT model. *Journal of Electronic Commerce Research*, 13, 104-121

INTERVIEWS

Asbury, J. E. (1995). Overview of focus group research. *Qualitative health research*, 5(4), 414–420.

Berry, R. S. (1999). Collecting data by in-depth interviewing. Paper presented at the British Education Research Association Annual Conference, University of Sussex. Retrieved September 2014 from <http://www.leeds.ac.uk/educol/documents/000001172.htm>

boyd, D. (2008). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *Youth, identity and digital media* (pp. 119–142). Cambridge, MA: The MIT Press.

Burhanna, K. J., Seeholzer, J., & Salem Jr, J. (2009). No natives here: a focus group study of student perceptions of Web 2.0 and the academic library. *The Journal of Academic Librarianship*, 35(6), 523–532.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks: Sage.

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, 40(4), 314–321.

Dolan, P., Cookson, R., & Ferguson, B. (1999). Effect of discussion and deliberation on the public's views of priority setting in health care: focus group study. *BMJ*, 318(7188), 916–919.

Fetterman, D. M. (Ed.). (2010). *Ethnography: Step-by-step* (Vol. 17). Sage.

Fuller, H. A., Damico, A. M., & Rodgers, S. (2004). Impact of a health and media literacy curriculum on 4th-grade girls: A qualitative study. *Journal of Research in Childhood Education*, 19(1), 66–78.

Lindlof, T. R., & Taylor, BC (2002). *Qualitative communication research methods*.

Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media & Society*, 10(3), 459–477.

Lunt, P., & Livingstone, S. (1996). Rethinking the focus group in media and communications research. *Journal of communication*, 46(2), 79–98.

Morrison, H. (1998). Information literacy skills: An exploratory focus group study of student perceptions. *Research Strategies*, 15(1), 4–17.

Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism: Evidence for its incidence, nature, and psychological impact from three daily diary studies. *Journal of Social Issues*, 57(1), 31–53.

Wrigley, B. J. (2002). Glass ceiling? What glass ceiling? A qualitative study of how women view the glass ceiling in public relations and communications management. *Journal of Public Relations Research*, 14(1), 27–55.

PERFORMANCE TESTS

Hargittai, E. (2005). Survey measures of web-oriented digital literacy. *Social Science Computer Review*, 23(3), 371–379.

Van Deursen, A. (2010). *Internet skills. Vital assets in an information society*. University of Twente, Enschede.

DATA MINING

Kozinets, R. (2009). *Netnography: Doing Ethnographic Research Online*. London: Sage Publications.

Mechant, P. (2012). *De studie van interactiviteit in een Web 2.0-context: een exploratief-kwalitatief onderzoek op YouTube, Flickr en deviantART* (Doctoral dissertation). Ghent University.

Mechant, P., & Courtois, C. (2011). An evaluation of the potential of Web 2.0 APIs for social research. New challenges and methodological innovations in European Media Audience Research, Meeting Abstracts (pp. 43–44). Presented at the COST Action ISO906 : New challenges and methodological innovations in European Media Audience Research.

Snelson, C. (2013). Vlogging about school on YouTube: An exploratory study. *New Media & Society*, 1461444813504271.

Stragier, J., & Mechant, P. (2013). Mobile fitness apps for promoting physical activity on Twitter: the #Run-

Keeper case. *Etmaal van de communicatiewetenschappen, Proceedings*. Presented at the Etmaal van de Communicatiewetenschap.

Verdegem, P., D'heer, E., & Mechant, P. (2013). Tweeting the local elections in Belgium: a cross-media perspective. *Etmaal van de communicatiewetenschappen, Proceedings*. Presented at the Etmaal van de Communicatiewetenschap.

DIARY METHOD

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual review of psychology*, 54(1), 579–616.

Ladbrook, J., & Probert, E. (2011). Information skills and critical literacy: Where are our digikids at with online searching and are their teachers helping? *Australasian Journal of Educational Technology*.

PROBES

All, A., Coorevits, L., & Schuurman, D. (2013). Bottom-up radio: creating a new media format using living lab research. In *Breaking the Media Value Chain: VII International Conference on Communication and Reality*.

Gaver, B., Dunne, T., & Pacenti, E. (1999). Design: cultural probes. *Interactions*, 6(1), 21–29.

Graham, C., Rouncefield, M., Gibbs, M., Vetere, F., & Cheverst, K. (2007). How probes work. In *Proceedings of the 19th Australasian conference on Computer-Human Interaction: Entertaining User Interfaces* (pp. 29–37). ACM.

Mattelmäki, T. (2005). Applying probes—from inspirational notes to collaborative insights. *CoDesign*, 1(2), 83–102.

NOTES + GLOSSARY

A

Seven-point Likert scales can also be used for these questions. They have the advantage of being the most reliable scales, and they reduce the rounding error. However, increasing the number of scale points may also increase administration costs, non-response bias and respondent fatigue. When scales are being averaged in analyses, the cost of increasing the scale points will probably outweigh the benefits. When working with individual scales, the benefits of seven-point scales usually outweigh the costs.

B

This question takes up a lot of space in a survey and requires intense thinking by participants. When space is limited, researchers can opt for the following question, using the same items: 'Which of the following activities have you done in the past year/month?' It is important, however, to realize that deeper information is lost when using this last question.

C

These two questions use the same items listed below, but uncover different (although related) cognitive competencies: what people know about how social media or users operate, and in how far they would mind if they would operate in certain ways.

Cookie

A cookie is an amount of data that a server sends to the browser to be saved and sent back to the server on your next visit. This allows the server to recognize the browser and track what the user, or the web browser, has done in the past.

Log file

A logfile is a file that records events that happen while an operating system or other software is running.

API

An API is a defined set of request messages, along with a definition of the structure of response messages, that enables automated and repeatable collection of data.

Vlogs

Vlogs or video logs are a form of blog in which the medium is video. A vlogger is someone who regularly posts vlogs online (on their blog, on YouTube etc.).

Yourtwrapperkeeper

YourTwrapperKeeper is an open source application that enables researchers to track, archive and share datasets of tweets relating to various keywords.



Getting Started
Measuring Social Media
Literacy



Research
Hadewijch Vanwynsberghe
& Louise Haspeslagh



Graphic Design
Elvire Delanote
elviredelanote.be

