



Privacy Literacy and Digital Media Literacy: Can Digital Media Literacy be used in protecting user's online privacy?

Mushk Umar ¹

Abstract

In today's digital media landscape, the key aspects of media literacy need to be elaborated according to current forms of communication. With this growing media environment, media literacy must deal and talk about multiple literacies that could cater the risks associated with digital media as well. The growing use of technology and tracking of personal information has raised privacy concerns of people. In a society where state regulations are weak or absent, the key aspects of privacy literacy and digital media literacy are quite helpful in making users autonomous. By emphasizing the inclusion of key aspects of privacy literacy in digital media literacy, this article is focused on making an individual autonomous and protected in this ever expanding online world where private information is becoming a commodity. Digital media literacy is a skill based approach that help to analyse and understand broader codes and convention and deals with developing knowledge structures of individual. So including key aspects of privacy literacy like the understanding of personal data, analysing benefits and risks of sharing information online and conscious communication can strengthen both the individual and media literacy education.

Keywords: *critical thinking, digital media literacy, privacy literacy*

¹ Ph. D Scholar, University of the Punjab
Lecturer, Govt. Associate Degree College for Women, Bhera, Pakistan

Introduction

Due to advances in technology and proliferation of Internet of things, online privacy has become a serious concern (Paine, Reips, Stieger, Joinson, & Buchanan, 2007). So in this regard, understanding the nature of information and protection of one's data has become critical in this networked system. Accessing and storing of personal information by wrongful means or its misuse can exploit users in a number of ways (FTC, 2015). Secrets are the new gold mine on the web as spying and tracking has become one of the fastest growing business on the Internet. This intrusive monitoring of online consumers is for targeting advertisement, extracting routinely habits and is often paired up with probability algorithms that make use of data like income, education or geography to sell conclusions like future plan of loan payment or a plan of a summer holiday (Angwin, 2010). Therefore, efforts should be made to protect information from such predators online (Barnes, 2006). A lot of activities have shifted online as a result of technological advancement and due to Covid 19 pandemic, millions of people are forced to participate via online communication. A lot of people made use of Zoom to work, study or conduct meetings online. In April 2020, Zoom suffered a data breach where login details and contact information of a number of users were compromised (Winder, 2020). Earlier, there were incidents like the Yahoo security breach in 2014 that was reported by New York Times in 2016 where 500 million accounts were compromised (Goel & Perlroth, 2016) or in 2020 Facebook security breach that exposed information of 50 million users in 2018 (Isaac & Frenkel, 2018). There was an incident where Facebook handed over user data to Cambridge Analytica (Confessore, 2018). Proper legislation and laws are the preventive measures on government level but at the same time skill training and practice can help prevent risk of privacy from user end. Users have a poor knowledge of privacy (Hoofnagle, King, Li, & Turow, 2010). Livingstone (2008) concluded lack of internet literacy as one of the reason of handling privacy on digital media. Users have low literacy in terms of policy knowledge and technical expertise (Park, 2013). The data protection laws and strategies present online have intricate mechanisms. van Deursen & Mossberger, (2018) recommend direction of future research by proposing the idea of making individuals autonomous. They argue that providing necessary skills to the users will reduce risk associated with the use of digital media. This generates a systematic

inquiry to explicate the use of online privacy literacy into the digital media literacy debate. The purpose of this research is to examine whether privacy can be the part of digital media literacy debate. For this purpose, it is important to look into privacy literacy and media literacy through use of digital media. This study will be helpful in drawing comparison between privacy literacy and media literacy, which in turn, will be helpful in including or excluding privacy literacy in digital media literacy debate.

Growing Privacy Concerns

Bonneau, Anderson, & Danezis (2009) have found out that despite user's privacy settings, it is quite possible to extract personal and social data from social networking sites. Histories of browsers can be linked to social media platforms (De-anonymization). Google and Facebook are both first parties and third parties. Not only they have access to basic information of users but they also track user activities to other websites (Su , Shukla , Goel , & Narayanan, 2017). Beside first party applications, there are third party apps linked to social networking sites that could collect user information. Wang, Xu , & Grossklags (2011) collected data of 1800 third party applications to investigate their data collection practices on Facebook. More than 850 million times, consumers were asked to give out their basic information. Most frequent requested permission were access to profile information, email and posting on Facebook wall. Organizations now track user's shopping patterns, location data or do passive monitoring of mobile phones for location so that they can link the offline activities with their online activities and target ads or assess effectiveness of previously targeted ads (Tene & Polonetsky, 2013). Krishnamurthy & Wills (2009) studied privacy diffusion (the diffusion of private information through gathering, combination and processing to third parties) and found out that independent third party domains have been acquired by the top five families: Microsoft, Google, Yahoo, AOL and Omniture. Their findings show that all these five families occupied more than 75% of their testing sample where Google had a penetration of nearly 60% and all of them are involved in privacy diffusion. Moreover, most of these families provide several facilities like emails services and have social networking sites where there are several opportunities of privacy leakage due to public availability of data without consent of the user. This kind of information collected online and its availability to few influential entities implicate increased privacy concerns.

Individual or Institutional Responsibility of Protecting Privacy

According to Privacy International report of 2019, Pakistan don't have a direct act, law or a regulatory body that could protect privacy of its citizens. Prevention of Electronic Crimes Act of 2016 is the most recent act of Pakistan that talks about privacy. Khan (2018) defines that PECA takes away freedom of expression and it is not reliable as it is less elaborative and gives more power to government or authoritative body as compared to the user. So it can be identified that the current legislative structure of Pakistan is weak and it could not help protect privacy of digital citizens properly. Hence, it is hard to protect citizens, hold someone accountable or punish criminals.

In a society where users are active consumers and producers of the content, where digital media is not regulated as traditional media like print or TV, where public regulation is not enough and individual self-regulation is required; there is a need of user based approach that combines media literacy with risks and consequences of using online media. According to Perera, Ranjan, Wang, Khan, & Zomaya (2015), there are five stakeholders involved in protecting privacy. Individual, government and third party developers are three of these stakeholders. In a world where everything is being digitalized, the role of a person in sharing and restricting information is important. The digitalization has made users active recipients and producers of content. Pangrazio & Selwyn (2019) talks about growing awareness of commercial production of digital text and datafication and commodification of digital practices where it is required from an individual to possess critical understanding of personal data and its assemblage. They also explain that it is the user who produce the data, so developing user capacity should be the focus. The user should be able to identify, analyse and take action in protecting its data.

van Deursen & Mossberger (2018) put forward that in order to make public policies successful, users need to have skills to analyse the nature of data collected about them, communicate their privacy concerns and make decisions about information they see and use. Baek (2014) also highlights the importance of digital literacy for protecting user privacy. Wallis & Buckingham (2013) state that self-regulation and individual responsibility is more important. They explain that with new media technologies, it is quite difficult to regulate it via

centralized state regulation. So in order to avoid harmful consequences, consumers should be encouraged to act responsibly.

Media Literacy and Literacy that deals with Online Privacy

Media literacy definition stated by Aufderheide in 1992 and adopted by Ofcom in 2004 states media literacy as the ability to access, analyze, evaluate and communicate messages in a variety of forms. Christ and Potter (1998) define the concept of media literacy as the capabilities to access and consume the information along with the ability to analyse and evaluate broader codes and conventions used by the media. Further studies from Buckingham, (2007, 2009); Hobbs (2010); Jenkins, Clinton, Purushotma, Robison, & Weigel (2009) define media literacy for digital users as having critical perspective and ability of using different tools as active and empowered users. While devising definition for digital media, the dimension for understanding and analyzing media content has been defined differently from traditional literacy definitions. Many scholars define digital media literacy, focusing on a critical approach and adopting critical skills and critical understanding of media. This critical approach provides a broader understanding of social, economic, political and cultural aspects of new media.

Apart from media literacy, there are other literacies with reference to digital media such as digital literacy, ICT literacy, technological literacy or e-literacy, which define the use of technical and cognitive ability to find, evaluate and communicate information (ALA, 2016). Here it is eminent that previous media literacy definitions were with reference to other forms of media like print and TV where focus was on cognitive skills to deconstruct media and its content. Whereas digital competency and literacy approaches deal with operational skills and ability to use digital media. According to Buckingham (2010), digital literacy approaches are confined to information retrieval tasks and lack critical evaluation of knowledge. He also argues that this critical aspect has been developed in media education for many years so it can be utilized for digital media. The basic conceptual framework of media literacy is quite useful but it also require new methods and there is a need of extension with respect to digital media.

All these approaches deal with information awareness and skill development but seem to neglect the fact that the medium we interact in this digital world, is far more than just a form of media. There are several other things involved like algorithms, datafication,

commercial production of text and then there is the big data. So the next focus should be not just the knowledge of technical aspects and media production but also demystifying the predators that are after the data produced from user end and the awareness of the hidden contexts of information processing.

Other than media or digital literacy approaches, there is a literacy approach that deals with user privacy i.e. privacy literacy. It can be defined as understanding and controlling personal data on the Internet (Pangrazio & Selwyn, 2019). Trepte, et al., (2015) talk in term of desired and achieved level of online privacy where former refers to the knowledge of practices and technical aspects to protect data to a certain extent and latter relates to the application and use of strategies to protect one’s data. So, in order to regulate privacy, users must have the required skill i.e. privacy literacy (Bartsch & Dienlin, 2016). Rotman (2009) defines five key areas in privacy literacy framework: *Understanding*: identifying varying aspects of information; *Recognizing*: familiarity with outcomes when information is shared; *Realizing*: the realization of far reaching possible outcome regarding information shared online; *Evaluating*: the possibility of threats in social interactions; *Deciding*: consciously making decision of when to share what. All these definitions of privacy literacy talk about the understanding of practices, information and risks; possible future outcomes of sharing information; and taking decisions regarding conscious sharing and controlling one’s privacy.

Table 1:

Brief Definitions of Digital literacy, Digital media literacy and Privacy Literacy

Concept		Definition
Digital Literacy	the use of technical and cognitive ability to find, evaluate and communicate information (ALA, 2016)	Individual ability to use digital tools, access and evaluate digital resources, create and communicate to enable constructive social action (Martin, 2008).

Media Literacy/ Digital Media Literacy	The capabilities to access and consume the information along with the ability to analyse and evaluate broader codes and conventions used by the media (Christ & Potter, 1998).	Having critical perspective and ability of using different tools as active and empowered users (Buckingham, 2007, 2009; Hobbs 2010; Jenkins, Clinton, Purushotma, Robison, & Weigel 2009).
Privacy Literacy	Understanding and controlling personal data on the Internet (Pangrazio & Selwyn, 2019).	Understanding, recognizing, realizing, evaluating and deciding about one’s privacy (Rotman, 2009).

Media Literacy – A Way Forward

Buckingham, (2010) concludes that with the growing convergence in media, we need to address multiple literacies and talk about skills and competencies that are required by current forms of communication. In this regard, both digital media literacy and privacy literacy seem to highlight important aspects associated with online privacy in digital media. Both talk about empowerment at the individual level. So merging key aspects of privacy literacy in media literacy debate will be quite helpful in strengthening an individual.

Table 2:

Comparison between Digital media literacy and Privacy Literacy

Digital Media Literacy	Privacy Literacy
A skill based approach	A skill based approach
Understanding of technology	Understanding about personal data on Internet
Understanding processes of knowledge production	Achieved level of online privacy: knowledge of practices and technical aspects to protect data to a certain extent

Analysing critically how texts are produced and circulated	Recognizing how production circulation and use of personal information will be accessed by someone; Analysing benefits and risks of sharing information online
Communicate messages to interact and influence	Communicate consciously about when to share what
Access information	Self-identify information
Involve critical thinking	Involve critical thinking

Digital media require a broad and wide-ranging skill set that includes social and educational abilities. But when comparing digital media literacy and privacy literacy, both share several common elements like both of them make use of technology in some form and both of them talk about competencies in means of communication. Both of them talk about cognitive abilities of users and involve critical thinking. Digital media literacy seeks to encourage a deeper understanding with respect to knowledge, text and broader code and conventions associated with it. It talks about personal ability to access the media, understand the meaning of content and use the media for content creation and communication. Whereas privacy literacy deals with the understanding of protection of personal data, analysis of risk and benefits and conscious communication from the user end.

Wallis & Buckingham (2013) state that media literacy is a process of learning and making informed choices, effective use of technology as well as understanding and critical analysis of media. Therefore, it can be used as a way to enhance user autonomy in absence of well-developed media regulations. Potter (2010) also explains the purpose of media literacy. He explains that mass media can have potentially negative effects on individuals. It can influence people in certain ways – morally, cognitively, aesthetically and emotionally. The purpose of media literacy is to protect them from these negative effects. So media literacy must be developed in individuals so that they can gain control over negative influences in their lives. Potter (2004) stresses upon the need of a cognitive theory of media literacy. According to him, individual should be the locus of media literacy. Beside development of

certain skills, individual should have developed knowledge structures. The developed knowledge structures of an individual will help them make use of media exposure for their personal gains and avoid negative effects. So in this perspective, to avoid negative influences with respect to privacy, users must be aware of how their data is accessed and used to track their information online. Users also need to be aware of privacy policies and settings.

Conclusion

The above literature suggests that none of the initial media literacy debates have lost their relevance. Instead, they are developed by considering the innovations in technology. Despite their broadened framework, in the light of recent developments, there is still a need for further discussion and elaboration. The current media literacy debate is very much focused on text and interpretations with the technology but seem to undermine the risks and vulnerabilities associated with technology. Digital media literacy is a skill based approach that help to analyse and understand broader codes and convention and here, including key aspects of privacy literacy like the understanding of personal data, analysing benefits and risks of sharing information online and conscious communication can strengthen the individual further. The transitions in media literacy definitions and development in technology cannot ensure a rigid framework for any form of media in a society.

However, a gradual and timely construction or debate in media education can be helpful in skilful training of users of the media. Online Privacy requires complete understanding of the processes taking place online. This includes the know-how of system, knowledge of privacy settings and privacy policies. It means that digital media literacy can be quite helpful in developing knowledge structures which, in turn can help in taking decisions regarding reading terms and conditions of privacy policy and making settings of privacy. Making an individual responsible does not mean that the government or the third party app developers are free from protecting user privacy. Proper laws and regulations are needed to safeguard user privacy on a broader level. With the shifting paradigm of technology, there is a continuous need of research that could elaborate and expand the horizons of media literacy.

References

ALA. (2016). American Library Association. Digital Literacy Definition. Retrieved from <http://connect.ala.org/node/181197>

- Angwin, J. (2010, July 30). *The Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/SB10001424052748703940904575395073512989404>
- Audenhove, L. V., & Mariën, I. (2018). Media Literacy Policy in Flanders Belgium: From Parliamentary Discussions to Public Policy. *Journal of Media Literacy Education*, 10(1), 59-81.
- Aufderheide, P. (1992). A Report of The National Leadership Conference on Media Literacy. Queenstown: The Aspen Institute.
- Baek, Y. M. (2014). Solving the privacy paradox: A counter-argument experimental approach. *Computers in Human Behavior*, 33-42.
- Bartsch, M., & Dienlin, T. (2016). Control your Facebook: An analysis of online privacy literacy. *Computers in Human Behavior*, 56, 147-154. doi:10.1016/j.chb.2015.11.022
- Buckingham, D. (2007). Digital Media Literacies: rethinking media education in the age of the Internet. *Research in Comparative and International Education*, 43-55.
- Buckingham, D. (2009). The Future of Media Literacy in the Digital Age: Some Challenges for Policy and Practice. *medienimpulse*.
- Buckingham, D. (2010). Defining digital literacy – What do young people need to know about digital media? *Medienbildung in neuen Kulturräumen*, 59-71. doi:<https://doi.org/10.18261/ISSN1891-943X-2006-04-03>
- Christ, W. G., & Potter, W. J. (1998). Media Literacy, Media Education, and the Academy. *Journal of Communication*.
- Confessore, N. (2018, April 4). *The New York Times*. Retrieved from <https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html>
- FTC. (2015). *Internet of Things: Privacy & Security in a Connected World*.
- Goel, V., & Perlroth, N. (2016, December 14). *The New York Times*. Retrieved from <https://www.nytimes.com/2016/12/14/technology/yahoo-hack.html>
- Hobbs, R. (2010). Digital and media literacy a plan of action: White Paper. *The Aspen Institute*.
- Hoofnagle, C. J., King, J., Li, S., & Turow, J. (2010). How Different are Young Adults from Older Adults When it Comes to Information Privacy Attitudes and Policies? doi:10.2139/ssrn.1589864

- Isaac , M., & Frenkel, S. (2018, September 28). *The New York Times*. Retrieved from <https://www.nytimes.com/2018/09/28/technology/facebook-hack-data-breach.html>
- Jenkins, H., Clinton, K., Purushotma, R., Robison, A. J., & Weigel, M. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. MacArthur Foundation.
- Khan, E. A. (2018). The Prevention of Electronic Crimes Act 2016: An Analysis. *LUMS Law Journal*.
- 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), 393-411. doi:<https://doi.org/10.1177%2F1461444808089415>
- Martin, A. (2008). Digital literacy and the "digital society". In C. Lankshear, & M. Knobel (Eds.), *Digital literacies: Concepts, policies and practices* (pp. 151-176). Peter Lang Publishing.
- Ofcom. (2004). *Strategy and priorities for the promotion of media literacy: A statement*. London: Ofcom.
- Paine, C., Reips , U.-D., Stieger, S., Joinson, A., & Buchanan, T. (2007). Internet users' perceptions of 'privacy concerns' and 'privacy actions'. *International Journal of Human-Computer Studies* , 65(6), 526-536.
- Pangrazio, L., & Selwyn, N. (2019). 'Personal data literacies': A critical literacies approach to enhancing understandings of personal digital data. *New Media & Society*, 419-437.
- Park, Y. J. (2013). Digital Literacy and Privacy Behavior Online. *Communication Research*. doi:10.1177/0093650211418338
- Perera, C., Ranjan, R., Wang, L., Khan, S. U., & Zomaya, A. Y. (2015). Big Data Privacy in the Internet of Things Era. *IT Professional*, 17(3), 32 - 39. doi:<https://doi.org/10.1109/MITP.2015.34>
- Potter, W. J. (2004). Argument for the need for a cognitive theory of media literacy. *American Behavioral Scientist*, 266-272.
- Potter, W. J. (2010). The State of Media Literacy. *Journal of Broadcasting & Electronic Media*, 675-696. doi:10.1080/08838151.2011.521462

- Rodríguez-de-Dios, I., M.F.van Oosten, J., & José Igartua, J. (2018). A study of the relationship between parental mediation and adolescents' digital skills, online risks and online opportunities. *Computers in Human Behaviour*, 186-198.
- Rotman, D. (2009). Are You Looking At Me? - Social Media and Privacy Literacy. *iConference*. Chapel Hill.
- Su , J., Shukla , A., Goel , S., & Narayanan, A. (2017). De-anonymizing Web Browsing Data with Social Networks. *International Conference on World Wide Web*, (pp. 1261-1269). doi:<https://doi.org/10.1145/3038912.3052714>
- Tene, O., & Polonetsky, J. (2013). Big Data for All: Privacy and User Control in the Age of Analytics. *Northwestern Journal of Technology and Intellectual Property*, 11(5), 239-273.
- Trepte, S., Teutsch, D., Masur, P. K., Eicher, C., Fischer, M., Hennhöfer, A., & Lind, F. (2015). Do People Know About Privacy and Data Protection Strategies? Towards the "Online Privacy Literacy Scale" (OPLIS). In R. L. Serge Gutwirth, *Reforming European data protection law* (pp. 333-365). Springer.
- van Deursen, A., & Mossberger, K. (2018). Any Thing for Anyone? A New Digital Divide in Internet-of-Things Skills. *Policy and Internet*.
- Wallis, R., & Buckingham, D. (2013). Arming the citizen-consumer: The invention of 'media literacy' within UK communications policy. *European Journal of Communication*, 28(5), 527-540. doi:<http://dx.doi.org/10.1177/0267323113483605>
- Winder, D. (2020, April 28). *Forbes*. Retrieved from <https://www.forbes.com/sites/daveywinder/2020/04/28/zoom-gets-stuffed-heres-how-hackers-got-hold-of-500000-passwords/?sh=472a15ea5cdc>