

Contents lists available at [ScienceDirect](#)

# Kasetsart Journal of Social Sciences

journal homepage: <http://www.elsevier.com/locate/kjss>

## Empowering Indonesian women through building digital media literacy

Fiona Suwana <sup>a, \*</sup>, Lily <sup>b</sup><sup>a</sup> Queensland University of Technology, Brisbane, Australia<sup>b</sup> STIKOM, The London School of Public Relations, Jakarta, Indonesia

### ARTICLE INFO

#### Article history:

Received 22 March 2016

Received in revised form 29 September 2016

Accepted 23 October 2016

Available online 24 August 2017

#### Keywords:

digital divide,  
digital media literacy,  
gender digital divide,  
Indonesia,  
women's media literacy

### ABSTRACT

There is still a gender digital divide in Indonesia. Indonesian women need digital media literacy skills to effectively use the Internet and to raise their quality of life. Empowering literacy abilities includes the skills of using digital media to access, search, analyze, reflect, share, and create. In this qualitative research study, founders, leaders, and participants from IWITA (Indonesian Women Information Technology Awareness) and FemaleDev (Female Developer) were interviewed because these organizations focus on developing digital literacy for women. The findings indicated that digital media literacy remains low because of inadequate education, lack of opportunities and the patriarchal system in Indonesia.

© 2017 Kasetsart University. Publishing services by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### Introduction

There has been a massive growth in Internet use in Indonesia over the past decade. Indonesia's Ministry of Communication and Informatics (Kementerian Komunikasi Informatika dan Teknologi Republik Indonesia or Kominfo) reported that there were 82 million Internet users in 2014, and Indonesia has the eighth highest number of Internet users in the world (Kominfo, 2014). Of these 56 percent are men and 44 percent are women (Comscore, 2013) and Internet penetration is 29 percent of the total population (Jakarta Post, 2015). However, there remains a gender gap in Indonesian Internet users with many Indonesian women still not knowing how to effectively use digital media or the Internet.

Research by Intel indicated that the global Gross Domestic Product (GDP) will increase by USD 13–18

million if the number of women using the Internet increased 600 million (Intel & Dalberg, 2011, p. 12). However, research from the McKinsey Global Institute (MGI) on financial and digital inclusion, reported that 2.2 billion women (52%) are still offline. Therefore, if women had digital equality in this Internet expansion era it would impact significantly on gender work equality (McKinsey Global Institute, 2015, p. 12). This information demonstrates how important the Internet and women are in supporting economic development.

The digital divide is the concept of inequality regarding using digital media between a group or power that can or cannot access and use digital media (Hilbert, 2011, p. 4; Thurlow, Lengel, & Tomic, 2007, p. 130). One factor of the unequal use of computers or digital media in the world is the gender gap (gender digital divide), through which women only have limited access to digital media and fewer opportunities to join in Information Communication Technology (ICT) communities compared to men (Alliance For Women in Media Foundation, 2011, p. 1; Thurlow et al., 2007, p. 130). This is supported by several stereotypes holding that women are technophobic, lack interest,

\* Corresponding author.

E-mail addresses: [f.suwana@qut.edu.au](mailto:f.suwana@qut.edu.au), [fionasuwana@gmail.com](mailto:fionasuwana@gmail.com) (F. Suwana).

Peer review under responsibility of Kasetsart University.

and lack technological capabilities. However, the reason women use less digital media is because women have less employment, education, and income, which lead to less digital media access and use (*Alliance For Women in Media Foundation, 2011, p. 1*).

In the final declarations of the United Nations World Summit on the Information Society (2003–2005), heads of countries recognized that the digital gender divide exists and they declared a commitment to women's empowerment and gender equality to solve this divide (*WSIS, 2005*). Moreover, there is a great need to improve digital media literacy for women and to develop the capacities of girls and women to contribute in society, especially in ICT-related fields (*WSIS, 2003*). Digital media literacy is very important because it has the ability to assist people to reach digital competency, to critically and confidently use ICT, and to learn and communicate.

*Farida, Sulistiawati, and Hermana (2011)* cited Indonesia's Minister of Women's Empowerment and Child Protection who stated that the field of ICT is still dominated by men (subjects) while women are often just objects. It is necessary to improve women's digital media literacy, so they can support the potential of the nation (*Farida et al., 2011, pp. 78–79*). Women have been excluded from governance for many centuries; the lack of access to ICT could reinforce that marginalization if women do not master the technology and begin speaking about the future of ICT and their place in it (*Goulding & Spacey, 2002, p. 9*).

Women's empowerment actions in ICT have been emerging in Indonesia over the past few years through social or community organizations. First, there is the Indonesian Women Information Technology Awareness organization (IWITA) that aims to help Indonesian women to become technologically literate. Second, FemaleDev (Female Development) targets the college students of various universities in Indonesia through forming an environment of women that understand technology, invent creative ideas, and create useful programs or applications for society. This paper explores the role, opportunities, and challenges to implement and promote digital media literacy for Indonesian women.

## Literature Review

### *Gender Digital Divide*

The digital divide—the gap between the “haves” and “have-nots” to ICT access—is created not only by unequal access to technology but also through the lack of real engagement and use of the technology, and concerns about that use (*Selwyn, 2014, p. 356*). *Norris (2001)* described the digital divide as every inequality within the digital community, including access between men and women, rich and poor, and also developed and developing nations (*Norris, 2001, p. 15*). There are two forms of digital divide—access and the ability divide, and the inequality of ability to use ICT among those who already have access (*Dewan & Riggins, 2005, p. 300*).

In the Indonesian context, unequal participation has resulted to a degree from unequal access to information. However, education and literacy levels have even more

strongly influenced the capacity to engage with Internet usage (*Hill & Sen, 2005, p. 14*). *Renggana (2008)* found that the Internet can empower Indonesian women through opportunities, for example working and creating online shopping at home. Unfortunately, the development of ICT has not occurred automatically with the opportunity of women's usage of the Internet. The lack of digital media literacy can create a broader digital divide (*Renggana, 2008, p. 2*).

*Wakhidah (2012)* noted that the history of technological development spans from ancient times to the present. However, recently, technology is always associated with males, although technology is very useful and helpful for both males and females living in the era of globalization. Indonesian women are usually in a position as users rather than creators on the Internet (*Wakhidah, 2012*). Women's access to technology is still limited because of the need to raise the low education level of Indonesian women. This review also found that gender equality in technology is hard to be accomplish because a gender mainstreaming policy has still not been properly implemented (*Wakhidah, 2012*) which is in line with *Hilbert (2011)*, who stated there is a necessity to create policies and projects that truly allow girls and women to become equal members of an information society (*Hilbert, 2011, p. 22*).

### *Women's Empowerment*

There are themes from the literature of digital media and women's empowerment, including digital media use, rural women's access to services and enterprises, e-governance, and data (*Cummings & O'Neil, 2015, pp. 5–6*). *Widyastuti (2014)* citing Herawati stated three vital aspects for empowerment. First, meaningful access relates to access digital information and each individual's ability to use technology to enhance social living. Second, motivation does not relate to the ability to use technology but also to what is done with the use of this technology. Third, empowerment involves the social capacity of individuals to actively and confidently use digital media (*Widyastuti, 2014*).

*Nugroho* stated that women's empowerment has several aims: enhancing women's abilities and leaderships to actively participate, to bargain positions, to organize small or medium-size or large enterprises, to open employment opportunities, and to change the roles and functions of women's organizations at local levels as the media can support women to become active participants in their living local programs (*Nugroho, 2008, pp. 163–164*). ICT can bring major improvements to the economic, political, and social empowerment of women, and the promotion of gender equality (*Primo, 2013, p. 27*).

### *Digital Media Literacy*

Media literacy is not only the simple development of interpretive skills, but also involves a series of digital production skills that include “the ability to create, to be critical and to contribute as well as to consume” the digital content (*Flew, 2014, p. 86*). Moreover, new media or digital media literacy is social and cultural skills that are

developed in networking and established on traditional literacy (reading & writing), research skills, and also critical-analysis skills of media (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2009, pp. 28–29).

Society needs a configuration of well-developed communication and problem-solving skills that include these five digital media competencies (Hobbs, 2010, p. 17): (1) Access: finding and using media and technology tools skillfully and sharing relevant information with others; (2) Analyze and Evaluate: comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages; (3) Create: composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and techniques; (4) Reflect: applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior, and conduct; and (5) Act: working individually and collaboratively to share knowledge and solve problems in the family, the workplace, and the community, and participating as a member of a community at local, regional, national, and international levels (Hobbs, 2010, pp. 17–19).

Digital literacy programs must go beyond training or teaching the basic ICT skills of how to use the technology and include the context of where and when to apply the skills, knowledge, and information. Therefore, the participant needs the confidence to operate safely in a digital environment (Bunker, 2010, p. 14; Intel & Dalberg, 2011, p. 28) and also ICT training leads to more enhanced self-confidence and to improve women's lives (Intel & Dalberg, 2011, p. 65).

## Methods

The researcher applied qualitative methods with interviews, as in-depth interviews with a semi-structured format are often used in media and communication research. The researcher conducted in-depth interviews with prominent women and one man empowered by digital media. The interviewees were also chosen based on the information to be sought, which was related to women's empowerment programs and digital media expertise in Indonesia. They were 11 respondents (founders or initiators, managers, participants, and policy makers) of women's empowerment in Indonesia. These interviews covered their digital media literacy programs. Semi-structured questions investigated how these organizations can socialize and teach digital media literacy to Indonesian women and also investigated the development of digital media literacy (opportunities and challenges) that has been operated and implemented in Indonesia.

## Results

### *Digital Media and Indonesian Women*

Digital media has many benefits to women when such media can support them to work around patriarchal social norms in order to start or to expand their micro-enterprises (Srivastava & Manzar, 2013, p. 7). For example Indonesia's

Deputy Minister of Women's Empowerment and Child Protection for Gender Mainstreaming in the Economy, Sulikanti Agusni, argued that:

*"The Internet gives chances for mothers/housewives to become entrepreneurs, so they can produce additional income for households"* (Sulikanti Agusni, personal interview, February 17, 2014).

These benefits were also explained in more detail by Eunike Kartini (Indonesian Google Plus Community Manager), who wrote that:

*"Indonesian women can use ICT for micro-enterprises; like women can promote their products or services on Facebook and BBM because digital media are easier and more efficient rather than traditional media ... printed brochures and spread it in their areas of living"* (Eunike Kartini, personal interview, January 5, 2014).

Cummings and O'Neil (2015) found seven key potential advantages of women's usage, learning and gaining of digital media: increased self-confidence, social status, independence, and alternative representation and channels for self-expression, new opportunities in the public sphere, and new channels of engagement (Cummings & O'Neil, 2015, p. 6). Moreover, Jahja (2013) found that digital media training can provide Indonesian rural women with better social status, bargaining position, and influence in village policies (Jahja, 2013). Digital media literacy, therefore, is becoming increasingly necessary for Indonesian women in order to develop gender equality in Indonesia.

The report of Indonesia's Ministry of Communication and Informatics stated the Internet is a strong medium to empower the economic potential of Indonesian women. For example, housewives can use digital media for economic activities, information searching, and improving insights to better family welfare (Kominfo, 2014). Indonesian women can also find information from good sources, on health, family nutrition, and cooking recipes for example, and also inspiration for economic opportunities for online or offline business (Kominfo, 2014).

However, there are several structural factors which can limit whether or not women use ICT or digital media and how they use them, such as social (no literacy skills), material (no money to buy or use ICT devices) and psychological (unable to learn digital ICT skills) barriers (Cummings & O'Neil, 2015, p. 7).

Interestingly, the participants of FemaleDev shared different thoughts:

*"Indonesian women need media, mentors, and motivation to learn about technology because they believe it will be beneficial for improving their quality of life"* (EAD, CTA, and MR, personal interview, January 1, 2014).

Moreover, Natalia Dwi (The Vice Chairman of IWITA) stated:

*"Indonesian women should realize many benefits of the Internet that they can get for themselves, children, and their family. For example, they can get information about cooking or information about drugs or information about hobbies. It is very important for women to understand how*

technology could help create a better role for themselves and their family” (Natalia Dwi, personal interview, January 21, 2014).

Therefore, skills training, fora, or communities that have been created to teach women about ICT or digital media are important for empowering Indonesian women. Those can become solutions to overcome the limitations for Indonesian women regarding the digital media. Several factors that limit Indonesian women from using digital media, include stereotyping (women as subjects that should only work in domestic areas so they do not need technological ability), patriarchal culture (women should give up on technology), and extreme conditions (women perceive that conditions are fair to them) (Widyastuti, 2014). The founders of Indonesian Women Empowerment, Martha Simanjuntak (IWITA) and Yansen Kamto (FemaleDev) also shared that inequality in access of technology and strong cultural stereotypes or patriarchal culture that Indonesian women do not need technology are still present.

#### *Digital Media Literacy and Indonesian Women*

The access and facilities to the Internet are still limited in Indonesia because the penetration of Internet users has not yet reached 50 percent of the Indonesian population. This is caused by the infrastructure of facilities and equipment still being inadequate, especially in rural areas. Indonesian women still have limitations in using, operating, and accessing digital media based on the Internet (Widyastuti, 2014). Moreover, the ability to seek online information that is beneficial to many women is still low because they do not really understand how to use, choose, and access good information on the Internet or social media.

Hobbs (2010) identified five digital literacy competencies: access, analyze and evaluate, create, reflect, and act (Hobbs, 2010, pp. 17–19). Several informants in this research were women who are involved in digital technology learning. Therefore, they have more expertise in technical abilities than Indonesian women in general. All of them already have access and skills. Interestingly, several women as participants of FemaleDev have already created apps or understand computers, but they do not really understand what digital literacy is overall. Moreover, there are only some respondents who already have a good level of digital media literacy, and who can reflect and act with digital media, and they are the initiators, managers, and policy makers of Indonesian women's empowerment.

All respondents agreed that the level of digital media literacy of Indonesian women is still low, due to the lack of opportunities (access and skills) to technology in several areas. Interestingly, from this research, it was found that not all Indonesian women know about and understand digital literacy even though some of them have been studying in technology majors and working with technology. Furthermore, digital media literacy terms were still unfamiliar to many Indonesian women, although they were digitally literate at a variety of levels.

Indonesia's Deputy Minister of Women's Empowerment and Child Protection for Gender Mainstreaming in the Economy, Sulikanti Agusni stated that:

*“Non-governmental organizations or community organizations can improve digital media literacy because they are close with the society. They teach and share the information and knowledge of ICT to Indonesian women. In the end, the sharing and learning programs can support them to understand, share and create something by digital media”* (Sulikanti Agusni, personal interview, February 17, 2014).

All respondents stated that many Indonesian women usually use the Internet for interaction on social media and there are only a few Internet users among Indonesian women who have used Facebook for business. Cummings and O'Neil (2015) stated that the advantages of ICT use are: increased self-esteem, greater respect from others, decision-making power in households, new micro-business opportunities, and easier access to public information and services (Cummings & O'Neil, 2015, p. 7). Indonesian women need digital media literacy so they can understand and apply the advantages of the Internet in their daily lives and in the community.

One respondent, Martha Simanjuntak (Founder of IWITA) explained:

*“Digital media literacy levels in Indonesian women are still low, especially in rural areas. Actually, this is very important for Indonesian women; for example, digital media literacy can be used to teach children to effectively use the Internet, so they can create a better quality younger generation”* (Marta Simanjuntak, personal interview, January 21, 2014).

IWITA believes that digital media literacy starts with awareness and learning first and then continues to the implementation and socialization of the technology usage, so it can be beneficial for Indonesian women themselves and others. This is in line with Renee Hobbs's digital literacy competencies (Hobbs, 2010, pp. 17–19), and to improved lives for women (Intel & Dalberg, 2011, p. 65). After individuals can create content, they can continue to reflect and act confidently with digital media.

Women's groups or the community have become a target for digital literacy programs for the country, because women are the main support for family welfare, and women can monitor and prepare the development of children to become a better and more competent digital generation in the future (Kominform, 2014). This is in line with Yansen Kamto (founder of FemaleDev) who explained the aim of FemaleDev:

*“The aim is for teaching and guiding them to become female coders or developers. 90 percent of coders or program developers are men, so the problems are usually solved by me and this tends to lead to bias. Therefore, I am passionate to bring women to become coders or program developers as these women can also contribute to solve problems in the world. So, Indonesian women are not left behind. They can get support to create something useful for society. FemaleDev always wants to help in bridging the inequality, especially for Indonesian women who have a lack of self-esteem, confidence, and motivation”* (Yansen Kamto, personal interview, January 1, 2014).

The consequence of having relatively few women web developers and programmers means there is a lack of online content related to women's needs and interests

(Antonio & Tuffley, 2014). There is still male dominance in the ICT world. As Putri Izzati (manager of FemaleDev) also argued that:

*“FemaleDev tries to change this condition with teaching them with hard skills (digital media literacy) and providing them with soft skills (leadership or organizational) so they can become motivated and confident in the ICT world”* (Putri Izzati, personal interview, January 1, 2014).

Previous research explicitly stated the same things are happening in Indonesian cases where the advantage of ICT use is to increase the self-confidence of the women (Bunker, 2010, p. 7; Cummings & O’Neil, 2015, p. 6; Intel & Dalberg, 2011, p. 28).

#### *Indonesian Women’s Empowerment by Digital Media Literacy*

Women’s empowerment actions that have been conducted by IWITA and FemaleDev are relevant to the digital literacy competencies identified by Hobbs (2010). They usually teach digital literacy to Indonesian women. However, both organizations have different training programs and target respondents. For example, the IWITA provides learning and awareness about technology (knowledge of technology), creating information in digital media (create a blog), and analyzing information using digital media (how to use the Internet and social media the right way). FemaleDev provides opportunities to learn about creating (create mobile apps or computer coding programs) and acting (conducting FemaleDev programs at their own universities or colleges) to continue teaching and reaching more women.

One the one hand, IWITA has target participants such as housewives, while FemaleDev has younger participants such as university/college students. Therefore, the programs themselves are unique. IWITA aims to teach housewives to create blogs and social media for useful purposes. Martha Simanjatak (the founder of IWITA) mentioned:

*“Indonesian housewives can start with a simple one, such as they can share cooking recipes or the way of educating children on their blogs, so it will be useful for informing other women. Next, housewives can use digital media to do business from their homes, so they can work at home and gain income, experience, or networking in their life”* (Marta Simanjatak, personal interview, January 21, 2014).

The usage of digital ICTs can enable women to gain new opportunities in the public sphere, in particular in enterprises or business (Cummings & O’Neil, 2015, p. 6). Fuller stated that if women are equipped with digital tools, they can get opportunities to challenge gender inequalities; for example, access to employment, income, education, and health services (Alliance For Women in Media Foundation, 2011, p. 2). IWITA not only promotes digital media literacy, but also tries to overcome gender inequalities for Indonesian women, regarding income and educational situations. Also, FemaleDev has aimed and targeted participants such as female university or college students and teach these young women to know and use coding in computer programs so they can create mobile apps, and websites. Thus, their programs do not start only with access, and analyze and evaluate, but also include create, reflect, and act. Putri

Izzati (manager of FemaleDev) explained why FemaleDev chooses young women as the target of Indonesian women’s empowerment:

*“Students are selected for the focus of women’s empowerment because they are still young and eager to learn in our workshop, so students have more time rather than employees when they are usually very busy. Also, students have a lot of energy to create and to continue”* (Putri Izzati, personal interview, January 1, 2014).

In Indonesia, young people as students are the group of the people who have the highest Internet penetration, especially for those who live in cities, as they are familiar with the Internet. Moreover, FemaleDev also taught its participants to create FemaleDev at their universities/colleges, so these Indonesian young women are encouraged to act in ways that are related to digital media literacy. Therefore, FemaleDev has taught a more advanced level of digital media literacy to its target respondents than IWITA, by including create, reflect, and act (Hobbs, 2010, p. 17), however, both IWITA and FemaleDev could complete each other’s program and target respondent.

MR, a participant in a FemaleDev workshop shared her experience:

*“I feel more comfortable in FemaleDev’s workshop because all members and mentor are women so it was very easy to ask and discuss with others and mentors/teachers. I tried to join another technology workshop that combined men and women, but it was hard to ask and interact because men were very fast to learn and dominant in that workshop. Also, I feel more confident and motivated when I can see other female members who can make applications or programs”* (MR, personal interview, January 1, 2014).

The teaching of digital media literacy in Indonesia for women should be conducted by women too because they can communicate more effectively and efficiently with other woman and can understand or support each other. Furthermore, women become motivated and do not feel self-low esteem because they can see a role model or good example that women can have skills in technology or digital media literacy. In addition, women are more patient and nurturing to others, so the learning environment becomes more conducive and effective.

#### **Conclusion and Recommendations**

This research explored and analyzed the role, opportunities, and challenges of initiators, managers, and participants of women’s empowerment in Indonesia, and the results confirmed that there were problems with digital media literacy and a gender digital divide related to the capability divide in Indonesia. Some Indonesian women are active Internet users but the digital media literacy of them is still low. Several obstacles to Indonesian women using digital media were found by these two organizations: low educational background, lack of ability, lack of facilities, lack ICTs workshops/training for women, and also a patriarchal cultural influence.

IWITA and FemaleDev can become solutions to improve digital media literacy for Indonesian women because both

groups implemented digital media literacy programmes and suggested that Indonesian women need media, motivation, and mentoring to support their skills. In response to this, IWITA and FemaleDev have already tried to overcome the existing problems by teaching and promoting digital media literacy to Indonesian women. The women's empowerment actions through digital media literacy that have been achieved by IWITA and FemaleDev can influence the increasing levels of digital media literacy in Indonesian women. However, these are still limited and only on a small scale because the training or workshop programs are carried out by limited numbers of Indonesian women in limited areas.

Women's empowerment through technology in Indonesia should grow and engage with other communities or organizations, for example with IWITA, FemaleDev, or others. As these communities or organizations are suggested to collaborate each other, so they can expand their training or workshops to cover the variety of age and levels of Indonesian women's digital media literacy and also can increase the number of female teachers of digital media literacy. In turn, these female teachers can become good role models for Indonesian women and men with equal skills of technology or digital media literacy. Collaboration is needed among Indonesian women's empowerment programs, from government as the policy makers and infrastructure builders, non-governmental organizations as the initiators/creators of women's empowerment actions, and from communities, as the developers to support and expand Indonesian women's empowerment directly, especially to reach out to Indonesian women who live in rural areas. The government, through the Ministry of Women's Empowerment and Child Protection and the Ministry of Communication and Informatics in Indonesia should pay more attention to Indonesian women in their digital access and digital media literacy development because women play important roles in educating children, improving the quality of families, and developing their nation.

### Conflict of Interest

Authors declare that there is no conflict of interest.

### References

- Alliance For Women in Media Foundation. (2011). *Special report on digital literacy for women and girls*. McLean, VA: Author. Retrieved from <https://www.itu.int/en/ITU-D/Digital-Inclusion/Women-and-Girls/Documents/ReportsModules/Special%20report%20on%20digital%20literacy%20for%20Women%20Girls.pdf>.
- Antonio, A., & Tuffley, D. (2014). The gender digital divide in developing countries. *Future Internet*, 6(4), 673–687. <http://dx.doi.org/10.3390/fi6040673>.
- Bunker, B. (2010). *A summary of international reports, research and case studies of digital literacy*. New Zealand: New Zealand Computer Society Inc.
- Comscore. (2013). *Southeast Asia digital future in focus 2013*. Retrieved from [http://www.comscore.com/Insights/Presentations\\_and\\_Whitepapers/2013/2013\\_Southeast\\_Asia\\_Digital\\_Future\\_in\\_Focus](http://www.comscore.com/Insights/Presentations_and_Whitepapers/2013/2013_Southeast_Asia_Digital_Future_in_Focus).
- Cummings, C., & O'Neil, T. (2015). *Do digital information and communications technologies increase the voice and influence women and girls? A rapid review of the evidence*. London, UK: Overseas Development Institute. Retrieved from <http://www.odi.org/publications/9499-women-icts>.
- Dewan, S., & Riggins, F. J. (2005). The digital divide: Current and future research directions. *Journal of the Association for Information Systems*, 6(12), 298–337.
- Farida, S. W. W. R., Sulistiowati, B. Y., & Hermana, B. (2011). Internet adoption in Indonesian education: Are female teachers able to use and anxious of internet? *International Journal of Computer Science and Information Society*, 9(4), 78–87.
- Flew, T. (2014). *New media: An introduction* (4th ed.). Melbourne, VIC, Australia: Oxford University Press.
- Goulding, A., & Spacey, R. (2002). Women and the information society: Barriers and participation. In *68th IFLA council and general conference*, August 18–24.
- Hilbert, M. (2011). Digital gender divide or technologically empowered women in developing countries? A typical case of lies, damned lies and statistics. *Women's Studies International Forum*, 34, 479–489 (Elsevier)
- Hill, D., & Sen, K. (2005). *The internet in Indonesia's new democracy*. Oxon, UK: Routledge.
- Hobbs, R. (2010). *Digital and media literacy a plan of action: White paper*. Washington, DC: The Aspen Institute.
- Intel, & Dalberg. (2011). *Women and the web*. Retrieved from [http://dalberg.com/documents/Women\\_Web.pdf](http://dalberg.com/documents/Women_Web.pdf).
- Jahja, N. (2013). *Global information society watch 2013, women's right, gender and ICT*. Retrieved from [http://issuu.com/hivos/docs/giswatch\\_2013\\_chapters/134](http://issuu.com/hivos/docs/giswatch_2013_chapters/134).
- Jakarta Post. (2015). *Internet users in Indonesia reach 73 million*. Jakarta, Indonesia: Author.
- Jenkins, H., Clinton, K., Purushotma, R., Robison, A. J., & Weigel, M. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century, digital media learning*. Cambridge, MA: The John D. and Catherine T. MacArthur Foundation.
- Kominfo, Kementerian Komunikasi Informasi dan Teknologi Republik Indonesia. (2014). *Kemkominfo: Pengguna Internet di Indonesia Capai 82 Juta [Indonesian ministry of communication and information: internet users in Indonesia reached 82 million]*. Retrieved from [http://kominfo.go.id/index.php/content/detail/3980/Kemkominfo%3A+Pengguna+Internet+di+Indonesia+Capai+82+Juta/0/berita\\_satker](http://kominfo.go.id/index.php/content/detail/3980/Kemkominfo%3A+Pengguna+Internet+di+Indonesia+Capai+82+Juta/0/berita_satker).
- McKinsey Global Institute. (2015). *McKinsey Global Institute report: The power of parity: How advancing women's equality can add \$12 trillion to global growth*. Retrieved from <http://www.mckinsey.com/global-themes/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth>.
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the internet worldwide*. Cambridge, MA: University Press.
- Nugroho, R. (2008). *Gender dan strategi pengarus-utamaannya di Indonesia [Gender and mainstreaming strategy in Indonesia]*. Yogyakarta, Indonesia: Pustaka Pelajar.
- Primo, N. (2013). *Gender issues in the information society, UNESCO publications for the world summit on the information society*. Paris, France: The United Nations Educational, Scientific and Cultural Organization (UNESCO). Retrieved from [http://portal.unesco.org/ci/en/file\\_download.php/250561f24133814c18284feedc30bb5egender\\_issues.pdf](http://portal.unesco.org/ci/en/file_download.php/250561f24133814c18284feedc30bb5egender_issues.pdf).
- Renggan, R. S. (2008). *Kesetaraan gender Dan Pemberdayaan Perempuan Dalam Masyarakat Teknologi Informasi Dan Komunikasi (gender & TIK)*. Jakarta, Indonesia: e-Indonesia Initiative 2008 (ell2008) Konferensi dan Temu Nasional Teknologi Informasi dan Komunikasi untuk Indonesia.
- Selwyn, N. (2014). Reconsidering political and popular understandings of the digital divide. *New Media & Society*, 6(3), 341–362. <http://dx.doi.org/10.1177/1461444804042519>.
- Srivastava, R., & Manzar, O. (2013). *The internet as a pathway for women's empowerment in India digital empowerment foundation*. Global Information Society Watch, APC and HIVOS. Retrieved from [http://www.giswatch.org/sites/default/files/india\\_gisw13.pdf](http://www.giswatch.org/sites/default/files/india_gisw13.pdf).
- Thurlow, C., Lengel, L., & Tomic, A. (2007). *Computer mediated communication: Social interaction and the internet*. London, UK: Sage Publication.
- Wakhidah, N. (2012). *Perempuan dalam Perkembangan Ilmu Pengetahuan dan Teknologi*. Malang, Indonesia: UIN Fakultas Saintek. Retrieved from <http://ejournal.uin-malang.ac.id/index.php/egalita/article/download/1912/pdf>.
- Widayastuti, D. A. R. (2014). *Kampus dan Pemberdayaan Perempuan*. Retrieved from <http://berita.suaramerdeka.com/smcetak/kampus-dan-pemberdayaan-perempuan/>.
- World Summit on the Information Society (WSIS). (2003). *WSIS: Plan of action*. United Nations. Retrieved from <http://www.itu.int/wsis/docs/geneva/official/poa.html>.
- World Summit on the Information Society (WSIS). (2005). *Tunis commitment*. United Nations. Retrieved from <http://www.itu.int/wsis/docs2/tunis/off/7.html>.