

Social Development and Gender Gap in Information Technology Perspective

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Abstract

ICT's rapid growth should benefit society. ICT can empower the poor, grow the economy, and develop society. However, ICT infrastructure growth is still not able to reach all levels of society, and its use might produce gender disparities in accessing social networks and social capital, especially for women. Women are still underrepresented in IT development. Skills, education, language barriers, time restrictions, sexy stereotypes that make women easy targets for harassment, and changing cultural and social standards all contribute to the digital divide of women. Information and communication technology is used to study social progress and gender gap (ICT). This study uses qualitative descriptive methodologies. This study revealed that social development based on ICT could be the key to economic growth and empowering the marginalized. Still, social development with ICT can create a gap that we know as the digital divide. The development of this digital divide is not only caused by the absence of tools but more than that due to a gender gap.

Keywords: *Social Development, Gender Gap, Digital Divide, Information and Communication Technology (ICT).*

A. INTRODUCTION

Social development is one method for achieving social welfare (Elliot, 1993; Scaffer, 1996). Social development has two interrelated dimensions: the first is the development of the human capacity to work continuously for the welfare of himself and the larger community, and the second is the change or development of community institutions so that human needs are met at all levels, especially the lowest, by improving the relationship between society and socio-economic institutions and recognizing that human and natural forces are constantly interacting. (Paiva, 1977; Castells, 1999).

According to Midgley (2013), in achieving social development, seven strategies can be used, namely, the human capital strategy, which supports investment in skills and knowledge through education, including schools, universities, literacy training, and daycare, as well as nutrition and health programs. Second, social capital and community development strategies based on principles that support community participation in social and economic projects at the community level include investment strategies that foster social development. Third, decent work combines social investment interventions to promote profitable, fulfilling, and productive work. Fourth, microenterprises rely on microfinance to invest in small businesses among the

poor engaged in cooperative business ventures run by women to individually owned companies. Fifth, the asset approach mobilizes investment in financial assets through individual development programs (IDAs) and other savings programs. Also, it encourages the acquisition and management of community and state-owned assets. Sixth, social protection goes beyond the consumption focus of conventional social security schemes to incorporate various measures that protect family livelihoods while simultaneously investing in their well-being. Finally, social planning consists of a macrosocial development strategy that mobilizes various social development activities at the national level (Midgley & Pawar, 2016).

Information and Communication Technology (ICT), which is currently expanding, can be utilized to its fullest extent in implementing social development plans (Kozma, 2005; Assar et al., 2010). With the right use of ICT, particularly access to the internet, it will be able to become a vital factor in economic growth and social development, as well as empower disadvantaged individuals and promote the integration of social development and economic growth (Castells, 1999; Chen & Wellman, 2005). Despite this, the existence of ICT is not always beneficial and has a positive impact; infrastructure development for ICT is still unable to reach all levels of society; and the use of ICT can create gaps in access to social networks and social capital, resulting in greater inequality among individuals. People who are disadvantaged, such as women, impede societal growth (Zheng & Walsham, 2008; Howard et al., 2010). According to Stiglitz (2002), ICT plays a vital role in formulating strategies and shaping ICT claims that have improved access to markets, the efficiency and competitiveness of the poor, and access to remote education. Utilizing ICT also promotes gender equality because it facilitates women's participation in development and generates new employment opportunities for them (Gurumurthy, 2006).

However, if this ICT technology does not quickly include the world's marginalized by providing the main benefits, then this technology will make the marginalized people even more marginalized (Fors & Moreno, 2002). Furthermore, because in developing countries, the majority of the marginalized are women, unless efforts are made to eliminate inequalities, there will be a risk that ICT will widen the gender gap and the positive impact of ICT will not be achieved (Palomarez-Ruiz et al., 2020). Several examples show that many women have succeeded in becoming CEOs in companies in the ICT sector and banking or other sectors. However, these examples are very few, and the factors that affect each woman's life may differ from those that affect men's lives in the ICT field.

This problem seems to continue, and other problems accompany it; namely, the role of women in the development of information technology is still less than the large number of men who still play an essential role in information technology (Ahuja, 1995). Only a few women have the knowledge, skills, and opportunities to understand ICT. This happens because of the low self-confidence of women in technological issues (Volman & Van Eck, 2001).

The global condition of the development of information technology requires women workers in information technology to create, implement and use it optimally

(Orlikowski & Barley, 2001). For jobs related to public spaces, we see the role of women in ICT employment predominant in administrative positions, such as handling electronic mail, entering data, computer operators, and the like (Segovia-Perez et al., 2020). In addition, women's internet use in Indonesia has been limited to information-seeking activities according to topics of interest and social needs. This, of course, causes women not to be able to develop further to continue their education and work (Roan & Whitehouse, 2007).

Gender equality is still a central issue today. In terms of development, all planning steps and development strategic policies always pay attention to the interests of men and women so that the elements of justice and balance in gender-oriented development can be fulfilled. Both parties are aware of each other's strengths and weaknesses and complement each other to achieve one goal, namely development in all fields, which is essentially based on mutual respect and cooperation between men and women. In terms of contribution, it is also measured by the role of women in meeting industry needs where women are required to be able to master ICT in operations or applications in the work environment, given that rapid technological developments are not matched by knowledge and skills, women will not be able to compete with men.

B. METHOD

The research being presented here is a descriptive qualitative study. According to Moleong (2014), qualitative research is research that aims to understand phenomena about what is experienced by research subjects, such as behavior, perceptions, motivations, actions, and so on, holistically, and employing descriptions in the form of words and language, in an extraordinary natural context, and by utilizing a variety of natural methods. In other words, qualitative research is research that seeks to understand phenomena about what is experienced by research subjects. Furthermore, Snape (2003) explains that there are several characteristics of the qualitative method, namely: (1) the number of samples is small and selected using specific criteria; (2) detailed and in-depth data; (3) data analysis that provides opportunities for the creation of new concepts. The analysis technique uses observation and interview methods. The informants in this study were selected based on the consideration that these informants have potential and a role in gender-oriented social development influenced by information and communication technology (ICT).

C. RESULTS AND DISCUSSION

1. Concept of Social Development and Information and Communication Technology

Often, it's important to explain what "social development" means. People often have different ideas about what "social" means. When you look at the root, you can see that it can mean more than one thing. The word "social" means "not individual." So, social planning isn't about making changes for one person or one group. Instead,

it's about making changes for society as a whole. Social development is an improvement in the quality of norms and values in social institutions. These norms and values create patterns of interaction or, even more deeply, patterns of social relations (especially about power relations) between individuals and groups. So, social development is how people get better in their social lives. From the point of view of social development, community participation is not just a tool or method; it is also a goal. This is because active and creative participation in development brings out the best in people as people with goals, self-respect, and freedom. At the same time, they are getting better. In other words, social development is all about how the means and the most basic human rights are shared (social inclusion) (Conyers, 1982; Catalano & Hawkins, 1996).

Separation of social development from economic development is not meant to contrast the two, separate their implementation, or even see both as mutually exclusive options (Woolcock, 1998). The author argues that economic life is essentially social life. Social development is the foundation of economic development, so all development sectors must be rooted in the sociocultural life aspired by the people concerned, not the other way around; sociocultural development is only used as a sector (Chiu, 2004).

Social life is the foundation of everything, including business, industry, and so on. Social development is the growth of structure, culture, and social processes, which are the most important parts of social life (Blau, 2017). Social structure is the way that different social groups interact with each other, especially in terms of power. This is shown through social stratification, composition, and differentiation. As a result of this difference in power, the structure can create coercive forces, give orders (imperative), and stop or limit what people can do (actor). The power of the social structure can be formalized legally, like with laws or government policies, or it can be informal, like the "coercive" power of the business world, which, even though it isn't legal, controls the lives of most people in the community through advertising and other means (Parsons, 1970). This structural power is often used by the authorities (the state, which often works with powerful people in business) to build patterns of dominance in society that are unfair and hard to change. So, structural development means trying to balance the power between the government and the people or between the rich and the poor through development policies and laws that help the people (Farah, 2009). In other words, building structures is a way to make structures that are exclusive (unfair, discriminatory) less so (fair, provide equal rights).

Culture is all the systems of values, norms, beliefs, habits, and customs that are so deeply ingrained in people or groups that they have the power to change the way people act and think (from the inside out) (Turiel, 2002). A society's culture is not always the best way to live for the well-being and dignity of people and that society as a whole. But many groups always try to keep the culture as it is to protect their own interests and use cultural legitimacy to hurt other groups (cultural hegemony). So, cultural development is needed to improve the quality of value systems and customs that hurt people's welfare directly, such as through socialization and education, and

indirectly, such as through structural development and social processes (Reynolds et al., 2015).

Social processes are all the dynamics of daily interactions between community members that have not been structured or cultured. Through dynamic and creative social processes, individuals and groups can express aspirations relatively freely, conducting negotiations between community members, starting from seminars, dialogues on TV, and even chatting between residents in cyberspace and demonstrations. This arena can be a place for people to negotiate order to become a source of changes in the existing structure and culture (social order is a negotiated order) (Wirutomo, 2014). In current development practices, social processes are often hampered (restricted/imprisoned) by structures and cultures created for the benefit of certain groups. Consequently, development becomes exclusively hegemonic. Building a social process means building cultural and structural conditions in society that provide more expansive space for developing the quantity and quality of the social process itself (Wirutomo, 2016).

During the development of ICT, it will automatically affect social development. Information and Communication Technology is a tool that has benefits for human survival. The progress of ICT will answer all the needs of issues regarding the development of structural, cultural, and social processes, which are essential elements in social development. In social development, of course, social capital is needed. In this way, social capital and technology become very important for social development.

This social development is an effort to accelerate the cultural transition, which is in line with population growth and technological advances. In this way, the role of technological progress is very influential in social development; here are some of these roles:

a. Technology Becomes a process of social development

Development is a process. This is an important stage in all sectors. Social development is a process for better economic growth. The growth of an economy will require an update in technology. In this case, technology also has an important role. The existence of technology, making more and more economic growth, will make it easier in the development process.

b. Technology Facilitates Social Development

There are various innovations in technological progress. One of them will have an impact on social development. This is also accompanied by balanced social capital. This technology will facilitate social interaction, which is one of the elements of social capital.

c. Increasing the Excellence of a Product

There are many technological innovations that will affect social development, as it is known that economic development is inseparable from a structural, cultural, and social development process. That way, more sophisticated technology will improve the quality of these social development products. With this increase, the level of success of social development will be higher.

d. Facilitate Research and Social Development

In short, increased technology development will affect productivity. In the end, it will enhance social development. Using research will be very important in mature social development. This research will be very much needed for the existence of technology. That way, technology in implementation has an important role.

e. Creating Appropriate Social Concepts

There is information technology that can also enhance an appropriate social concept. In this case, technology will facilitate the development of structural, cultural, and social processes. The public needs to know that the role of technology in social development is essential for communication and information.

f. Creating Added Value and New Value

It can create added value and new value for a product. The existence of technology, accompanied by sufficient capital, will affect a product. This will be able to change or develop a product with high social value.

2. The Concept of Gender and Information and Communication Technology.

The concept of gender is used for social and personal relations between men and women, as well as the feminine and masculine concepts that are formed accordingly. Thus, gender is a category related to relations and politics (Flax, 1987). One aspect of gender analysis is the exploration of gender differences and their political significance by systematically asking whether there are differences between men and women in a population in terms of roles and activities, resources and constraints faced, and benefits and incentives received.

Gender problems arise when the unique needs of women are not met; for example, the need for education or health is a particular need for women. Meanwhile, gender equality will arise if attention/concern about gender does not arise while there is inequality for women in accessing facilities, opportunities, and resources (Schulze & Amering, 2020). Gender issues will arise if society realizes that inequality is wrong, unacceptable, and unfair. This realization may arise if the gender gap is large enough and women know their fundamental rights and right to democracy. In patriarchal developing countries, injustice is primarily against women, and it will be challenging to make gender equality an issue if there is no support from the public there.

Gender discrimination is an attitude and attitude pattern that causes a gender gap. The gender disparity never occurs intentionally but occurs because of discriminatory gender treatment. The different treatment for women and girls prevents them from accessing opportunities, facilities, and resources. Patriarchal control is a monopoly or domination of decision-making at every level of government and power (Rhode, 1999). Meanwhile, patriarchal belief is a system that serves the legitimacy of male domination and gender discrimination. This is based on the patriarchal interpretation of "bibliological superiority (sexism)," which claims that the

distribution of unequal rights between genders is natural (biological) or God's destiny or very difficult to change (Bradley, 2015).

Women experience higher barriers in ICT because they are more likely to be illiterate, have difficulty accessing education and information, have unequal ICT training, lack time, and lack economic and financial means. Even in many developing countries, women still lack access to ICT; even in some places, women are prohibited from entering internet centers or public arenas with ICT facilities (Antonio & Tuffley, 2014).

ICTs have developed in a culture called 'androcentric,' where decision-making, social and economic relations, and even the way we make decisions are made from a male-dominated perspective. This androcentrism that has pervaded Western history since its inception makes it easier for us to understand why women were not involved, or at least history did not record their participation, in the design of home technology that was designed by men. What their preferences are and create products that often respond to stereotypes rather than the real needs of women in the domestic space (Cockburn & Furst, 1994).

The emergence of ICT towards the end of 1970 brought the need for an analytical methodology to determine its social impact. It soon becomes clear that this analysis focuses on the work done by men, and it is assumed that the effect of technology is on them the same as it is on women. Therefore, gender differences were ruled out, and concepts related to job skills were not considered. The gender factor is not an essential element when the relationship between ICT and work is the topic to be discussed (Burkle, 2003).

Feminist discourse salvages gender differences in the analysis of technology use by arguing that the effects of ICT use do not have the same effects on women as they do on men (Cherry & Weise, 1996). In contrast, gender analysis reinforces the notion that technology has intensified the division of labor between men and women, defining the social relations between these groups, from the family to the workplace. Literature, in this case, has analyzed that technology produces and reproduces working status between women and men, between 'femininity' and 'masculinity.' Men-designed technologies emerge based on their relationship with nature and women. Evidence does suggest that the introduction of technology into the labor market has not substantially ended the gender division of labor or skills development (Webster, 2014). On the other hand, the emergence of new technologies for jobs reproduces divisions between the sexes, asserting that technology does not change predetermined occupations into genders. Even in industrialized countries, where technology does not seem to work against women, men benefit more from technological change, causing a growing gender gap.

The exercise of reflection on women and technology leads us to the need to break paradigms, that is, to acknowledge that it is impossible to understand the role that ICTs play in post-industrial societies so long as gender differences continue to be modeled. In which women's social relations are formed. Even though some essential changes can already be seen at a glance, gender remains a determining factor when

referring to the current status of women, both in industrialized and developing countries.

In several countries with advanced economies, projects have been developed over the last decade to promote women's full participation in the design and use of ICTs. An example of this is what is happening in the UK and in Germany, where a large number of academic associations have implemented programs at the university level where women are required to enroll in engineering or science; for example, where until a few decades ago, their presence was ignored. Some examples of these academic programs are the so-called 'WISE' in the UK (Women in Science and Engineering), which was created in 1984 to introduce young university-age women to the use and application of mathematical logic to mathematical development. Computer software; another developed in Germany to promote secondary school enrollment of girls in courses of a "complex" nature such as mathematics, chemistry, and physics. However, although both programs have been widely published in both countries, the results obtained have yet to be thoroughly analyzed in detail (Henwood, 1996).

The situation for women in developing countries is very different. In Southeast Asia, including Indonesia, for example, where this study focuses, it is common among low-income families for girls to leave primary school in the third or fourth grade to work and contribute financially to their brothers' education. This fact reinforces the notion that women are 'second-class citizens' who must be satisfied with learning household chores as the essential part of their education. To this factor must be added that in this part of the world, the use and access of technology is in the hands of a few (technological elite), excluding minority groups (women and indigenous people), thereby reinforcing brand marginalization and underdevelopment.

Barriers in the world of ICT provide more significant problems for women because they do not understand English, lack opportunities to get training in the computer field, the burden of household work is quite heavy, the economy is still weak, still experiencing cultural barriers, and finally, the content in the field of ICT still less relevant to women's lives in general. All these obstacles will further marginalize them from this ICT sector. Some of the obstacles for Indonesian women to access information technology in several developing countries include:

- a. Geographical conditions generally affect women's access to information technology in developing countries. In some societies, women's mobility is much more limited than men's.
- b. Women experience higher barriers in the ICT field because they are often illiterate, have minimal access to education and information, have unequal access to ICT training, lack time, and lack economic and financial means.
- c. Women are still under-represented in the private sector, government agencies, and other public sectors, which generally control the ICT sector. So that in the field of ICT, it is still rare to pay attention to the unique needs of women.
- d. The ICT industry is mainly controlled by men, which can be seen from the more men who become executives or directors.

- e. In the field of public/media, many women are subordinated to negative and sexy images and stereotypes, and there is still a lack of effort and struggle to eradicate this negative image.
- f. The patriarchal culture that places men is always associated with tasks and functions outside the home, while women are by nature to do and take care of the children. Patriarchal culture is also felt in the field of technology. Only now, only partially friendly towards women. There is still an assumption that technology is men's job and is a masculine realm. So the world of information technology is still "male-dominated."

The digital divide due to the current gender gap has been in the spotlight and is feared to threaten social development. Given the importance of this issue, the time has come for action to ensure that women in developing countries can activate themselves in the information age. Thus there will be many opportunities for women to be able to improve their standard of living and their families. The efforts to narrow the digital divide for women include:

- a. Providing women with an understanding of the importance of ICT (information literacy). The Prague Declaration (Unesco, 2003) states that information literacy is part of a person's information needs and is an ability to identify, locate, evaluate, organize, and make effective use of existing information to solve problems, and is needed again to participate effectively in the information society, and is also part of the basis of human rights in long life education which must be continuously developed.
- b. Eliminating gender discrimination The existence of such an attitude pattern causes a gender gap. The gender disparity never occurs intentionally but occurs because of discriminatory gender treatment. That is why it is necessary to eliminate differential treatment for women so that they get the same access, opportunities, facilities, and resources as men.
- c. Building transformative gender policies and culture. Transformative gender policies and cultures provide tools that empower women by giving them opportunities and control over ICTs, determining what kinds of ICTs they need, and wrapping them in policies that support women to achieve their goals. An approach with a social dimension is needed to be integrated into decision-making patterns that affect the role of women in the ICT field.
- d. Improve skills and competencies with ICT Bimtek. Recognizing the importance of women's role in using ICT for productive purposes, it is necessary to have ICT technical guidance for the women's community. This technical guidance is expected to increase awareness, learning, and application in personal and community life (implementation) and be able to socialize the use of ICT.

D. CONCLUSION

Based on research conducted on the use of Information and Communication Technology (ICT) and its relation to social development and gender gaps, it can be concluded that the use of ICT is a dimension of social development because it enables

the development of the human capacity to work continuously in order to achieve their welfare. The goal of social development, namely social welfare, has also been achieved through this ICT. After all, it can improve social status because it increases the community's economic capacity. Concerning social development and social inequality, the main principle of social development is to ensure that both men and women have many choices and realize their potential and freedom to live an honorable life where gender equality is the key. However, in the field of ICT, the digital divide that occurs is partly due to a gender gap where there are differences in access to computers and the internet between groups of women and men, and there are differences in skill and education levels, language problems, time constraints, and cultural and social norms. Given the importance of this issue, the time has come for action to ensure that women in developing countries can activate themselves in the information age. The efforts to narrow the digital divide for women include: (1) giving women an understanding of the importance of ICT (information literacy); (2) eliminating gender discrimination; (3) building transformative gender policies and culture; and (4) improving skills and competencies with ICT Bimtek.

REFERENCES

1. Ahuja, M. K. (1995, April). Information technology and the gender factor. In *Proceedings of the 1995 ACM SIGCPR conference on Supporting teams, groups, and learning inside and outside the IS function reinventing IS* (pp. 156-166).
2. Antonio, A., & Tuffley, D. (2014). The gender digital divide in developing countries. *Future Internet*, 6(4), 673–687.
3. Assar, S., El Amrani, R., & Watson, R. T. (2010). ICT and education: A critical role in human and social development. *Information Technology for Development*, 16(3), 151–158.
4. Blau, P. M. (2017). *Exchange and power in social life*. Routledge.
5. Bradley, H. (2015). *Fractured identities: Changing patterns of inequality*. John Wiley & Sons.
6. Burkle, M. (2003). Technology has forgotten them: Women in developing countries and information technologies. *Women, art, and technology*. MIT Press: Massachusetts.
7. Castells, M. (1999). *Information technology, globalization and social development* (Vol. 114). Geneva: UNRISD.
8. Catalano, R. F., & Hawkins, J. D. (1996). The social development model: a theory of antisocial behavior.
9. Catalano, R. F., Haggerty, K. P., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Social Development Research Group Findings. *Journal of school health*, pp. 74, 252–261.
10. Chen, W., & Wellman, B. (2005). Minding the cyber-gap: the internet and social inequality. *The Blackwell companion to social inequalities*, 523-545.
11. Cherny, L., & Weise, E. R. (1996). *Wired women: Gender and new realities in cyberspace* (No. hal-02297968).

12. Chiu, R. L. (2004). Sociocultural sustainability of housing: a conceptual exploration. *Housing, theory and society*, 21(2), 65–76.
13. Cockburn, C., & Fürst, R. (1994). *Introduction: Looking for the gender/technology relation*. Na.
14. Conyers, D. (1982). *An introduction to social planning in the Third World*. John Wiley & Sons Incorporated.
15. Elliott, D. (1993). Social work and social development: Towards an integrative model for social work practice. *International Social Work*, 36(1), 21–36.
16. Farah, N. R. (2009). *Egypt's political economy: power relations in development*. American Univ in Cairo Press.
17. Flax, J. (1987). Postmodernism and gender relations in feminist theory. *Signs: Journal of women in culture and society*, 12(4), 621–643.
18. Fors, M., & Moreno, A. (2002, June). The benefits and obstacles of implementing ICTs strategies for development from a bottom-up approach. In *Aslib proceedings*. MCB UP Ltd.
19. Gurumurthy, A. (2006). Promoting gender equality? Some development-related uses of ICTs by women. *Development in practice*, 16(6), 611–616.
20. Henwood, F. (1996). WISE choices? Understanding occupational decision-making in a climate of equal opportunities for women in science and technology. *Gender and Education*, 8(2), 199–214.
21. Howard, P. N., Busch, L., & Sheets, P. (2010). Comparing digital divides: Internet access and social inequality in Canada and the United States. *Canadian Journal of communication*, 35(1), 109–128.
22. Kozma, R. B. (2005). National policies that connect ICT-based education reform to economic and social development. *Human Technology: An interdisciplinary journal on humans in ICT environments*.
23. Melhem, S., Morrell, C., & Tandon, N. (2009). Information and communication technologies for women's socio-economic empowerment.
24. Midgley, J. O. (2013). Social development: Theory and practice. *Social Development*, pp. 1–296.
25. Midgley, J., & Pawar, M. (Eds.). (2016). *Future directions in social development*. Springer.
26. Moleong, L. J. (2014). Metode penelitian kualitatif edisi revisi. *Bandung: PT Remaja Rosdakarya*.
27. Orlikowski, W. J., & Barley, S. R. (2001). Technology and institutions: What can research on information technology and research on organizations learn from each other? *MIS Quarterly*, 145–165.
28. Paiva, J. F. X. (1977). A conception of social development. *Social Service Review*, 51(2), 327–336.
29. Palomares-Ruiz, A., Cebrián, A., López-Parra, E., & García-Toledano, E. (2020). ICT integration into science education and its relationship to the digital gender gap. *Sustainability*, 12(13), 5286.

30. Parsons, T. (1970). Equality and inequality in modern society or social stratification revisited. *Sociological Inquiry*, 40(2), 13–72.
31. Reynolds, K. J., Subašić, E., & Tindall, K. (2015). The problem of behavior change: From social norms to an ingroup focus. *Social and Personality Psychology Compass*, 9(1), 45–56.
32. Rhode, D. L. (1999). *Speaking of sex: The denial of gender inequality*. Harvard University Press.
33. Roan, A., & Whitehouse, G. (2007). Women, information technology and ‘waves of optimism’: Australian evidence on ‘mixed-skill’ jobs. *New Technology, Work and Employment*, 22(1), 21–33.
34. Schaffer, H. R. (1996). *Social development*. Blackwell Publishing.
35. Schulze, M., & Amering, M. (2020). Women’s Political and Economic Participation. *Mental Health and Illness of Women*, 59-80.
36. Segovia-Pérez, M., Castro Núñez, R. B., Santero Sánchez, R., & Laguna Sánchez, P. (2020). Being a woman in an ICT job: An analysis of the gender pay gap and discrimination in Spain. *New Technology, Work and Employment*, 35(1), 20-39.
37. Snape, D. S. L. (2003). The Foundations of Qualitative Research. *Qualitative research practice: A guide for social science students and researchers*, pp. 2–23.
38. Stiglitz, J. E. (2002). Towards a new paradigm for development: strategies, policies, and processes.
39. Turiel, E. (2002). *The culture of morality: Social development, context, and conflict*. Cambridge University Press.
40. Volman, M., & van Eck, E. (2001). Gender equity and information technology in education: The second decade. *Review of educational research*, 71(4), 613-634.
41. Webster, F. (2014). *Theories of the information society*. Routledge.
42. Wirutomo, P. (2014). Sociological reconceptualization of social development: With empirical evidence from Surakarta City, Indonesia. *Asian Social Science*, 10(11), 283.
43. Wirutomo, P. (2016). Dealing with brawls in Jakarta’s slum area: Pursuing social development through social engagement. *The Senshu social well-being review*, 3(3), 93–109.
44. Woolcock, M. (1998). Social capital and economic development: Toward a theoretical synthesis and policy framework. *Theory and Society*, 27(2), 151–208.
45. Zheng, Y., & Walsham, G. (2008). Inequality of what? Social exclusion in the e-society as capability deprivation. *Information Technology & People*, 21(3), 222–243.