

# Probing into the Development Communications for Disability Communities in Indonesia

Dhyah Ayu Retno Widyastuti<sup>a\*</sup>, Subejo<sup>b</sup>, <sup>a</sup>Universitas Atma Jaya Yogyakarta; Extension and Communication Development Study Program, Universitas Gadjah Mada, <sup>b</sup>Extension and Development Communication Study Program, Universitas Gadjah Mada, Email: <sup>a\*</sup>[dhyah.ayu@uajy.ac.id](mailto:dhyah.ayu@uajy.ac.id), <sup>b</sup>[subejo@ugm.ac.id](mailto:subejo@ugm.ac.id)

Real development is a development that can affect the improvement of all elements of society, including people with disabilities. The presence of Law No. 8 of 2016 is evidence of the Indonesian government's commitment to care for people with disabilities. Various public facilities are available to them, but the sensitivity of the community is still low as most people have not used some facilities according to their functions. The community approach becomes a breakthrough to build collegial participation in the development communication process, which includes raising awareness and respecting the existence of disabilities. Indonesia hopes to be able to contribute to the realisation of access equality for people with disabilities.

**Key words:** *Development communication, disability, Indonesia, community-based.*

## Introduction

The development of technology today can make anyone dumbfounded and start hobbling if they are not capable of using it. The community will undoubtedly continue to accept the presence of sophisticated facilities that provide a lot of convenience and great benefits. This stretch will continue to develop due to competition from one another. Smart technology that is often dubbed smart technology is becoming a trend and contributing to development.

Development is a useful change related to social and economic systems in a society. Servaes (2008) also identified development as a kind of social change where social engineering occurs and changes culture by changing its financial system. This change is used in a variety of contexts both related to issues of poverty, society, food, politics, education, and much more.



The welfare of the community in various aspects, including economic, social, political, cultural, education, and health, are expected to improve along with the social changes. The development process is carried out in stages, starting from planning, implementation, monitoring, until the evaluation stage of the development (Servaes, 2008).

Equitable development needs to be an integrated part of the development process itself. Development programs have not been evenly distributed throughout the region. The reality in terms of the Indonesian Information and Communication Technology (IP-ICT) Development Index is still low. From the data of Central Bureau of Statistics 2017, national IP-ICT is at the level of 4.99 on a scale of 0-10. There is a big difference between the provinces that have the highest IP-ICT of 7.51, which is Jakarta and Papua with the lowest IP-ICT of 2, 95. The Information and Communication Technology Development Index (IP-ICT) is a standard measure that can describe the level of information and communication technology development in a region, digital divide, and the potential for ICT development (Central Bureau of Statistics, 2018).

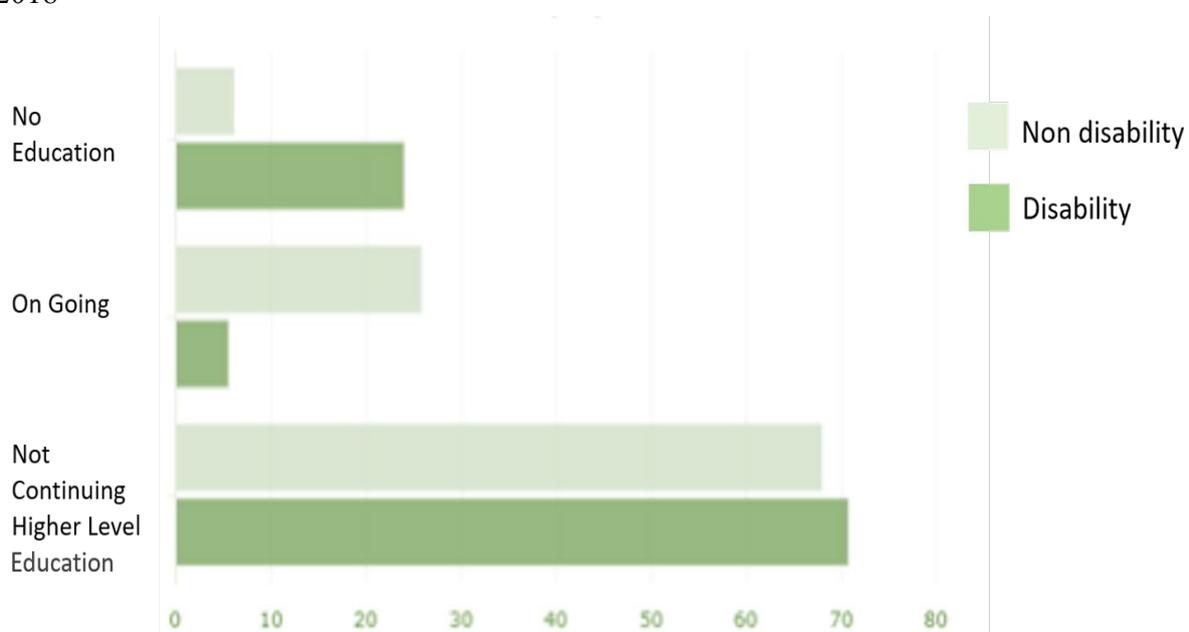
This inequality is increasingly visible when placed on disability. In various circles, "people with disabilities" has become a topic that has been discussed in recent years. This topic is interesting but is still relatively infamous in Indonesia. This domain involves groups that are considered vulnerable, namely the disabled, children with special needs, or people with disabilities. Issues also develop in other areas, such as physical infrastructure and the socio-cultural environment.

In general understanding, disability and poverty cannot be separated. Both tend to go hand in hand, forming a cumulative causal cycle. As appropriate, ongoing development can improve the capabilities of vulnerable groups of society. People with disabilities are one of the groups of people who are more susceptible to poverty, not only in Indonesia but in almost all countries. Their limited opportunities for education and skills development are driving poverty conditions. Gross Domestic Product is viewed from non-monetary financial aspects such as living standards in terms of education, health, and general living conditions (International Labour Organisation, n.d.). People with disabilities are likely to be poorer than those who are not disabled, and people who live in poverty are more likely to be disabled than those who are not (Dalal, 2010).

The reality also becomes more complicated when faced with gender differences. Women with disabilities have a higher risk than men with disabilities (International Labour Organisation, n.d.). When people with disabilities are female, a double problem arises because of sex and physical disability. Women are often assumed to be weak, passive, dependent on others, and these traits are compatible with the characteristics of persons with disabilities (Coleridge, 1993).

Based on PUSDATIN data from the Ministry of Social Affairs, in 2010, the number of people with disabilities in Indonesia was 11,580,117 people. In detail, the number with visual impairment was 3,474,035, physical disabilities was 3,010,830, hearing disabilities was 2,547,626, mental disabilities was 1,389,614, and chronic disabilities was 1,158,012 (International Labour Organisation, n.d.). Data from the 2012 National Socio-Economic Survey found that as many as 2.45% of Indonesia's population are people with disabilities. Data in 2018 shows that 5.48% of people with disabilities are still in school (Darajingga, 2018).

**Table 1:** Percentage of Population Aged 5 Years and Over According to School Participation 2018



**Source:** Central Bureau of Statistics, 2018

Table 1 shows that the percentage of people aged five years and over with disabilities who are still in school is only 5.48%. In detail, the data as quoted from [databoks.katadata.co.id](http://databoks.katadata.co.id) shows that the percentage is far from the population who are not disabled, which reaches 25.83%, while people with disabilities who have not or never attended school altogether reach 23.91%. The community aged five years and over who are not disabled and not yet in school is only 6.17%. Meanwhile, people with disabilities who do not attend school again amounted to 70.62%. The higher the age group, the lower the school participation rate. The highest APS occurred in the 7-12 years age group, which is 91.12% for people with disabilities and 99.29% for non-disabled people. Meanwhile, the lowest school participation rate happens in the age group of 19-24 years, which is 12.96% for people with disabilities and 24.53% for regular people (Jayani, 2019).

The basics in the development process is that smart technology must be accompanied by people who are 'smart' in using it. However, data related to education access so that people with disabilities can be more empowered seem increasingly distanced from expectations. Whereas the concern for people with disabilities does not merely stop at the level of discourse, attention to community issues is seen in the initiatives to develop ICT implementation among persons with disabilities by increasing more extensive accessibility.

It is undeniable that people with disabilities, both women and men, can and want to be productive members of society who play an active role in its development. It is a challenge to bring a disability-friendly environment, infrastructure and appropriate technology to this group. In this paper, the author tries to present an in-depth description of smart technology which can undoubtedly be a breakthrough in the problems faced by people with disabilities.

### **Theoretical Framework**

In this section, the author attempts to frame the relevant concepts to be employed as a basis for analysis on the dynamics of issues related to the development of communication in the context of persons with disabilities.

#### ***Development Communication in Disability Context***

The challenge of the study of development communication in developing countries is to design strategies that can support post-colonial and semi-feudal, semi-capitalist recent thinking to focus on counteracting the adverse effects of current realities (Melkote, Srivinas R., 2001). Development communication has various definitions. In simple terms, development communication is a communication process used for development. Angunga thought that the flow of Information and Communication Technology plays an essential role in development (Angunga, 1997). Without adequate information flow and two-way dialogue between the centre and the regions, the exchange of knowledge, market information, political discussion and evolution is not possible (Srampickal, 2006).

In this context, development communication emphasises that communication is the medium used to disseminate strategic ideas about development. Associated with communication and information technology, the contribution of ICTs consists of four categories; to support decision making for public administrators, improve services for the community, empower citizens, and support training programs (Luyt, 2002).

Based on Melkote's (2001) thinking, the definition of development communication, from a broader perspective, not only describes the progress and setbacks of the media for the modernisation paradigm, which was dominated in the 1960s and 1970s as written in his first

book in 1991. It also includes the development of education, the development of journalism, international communication, transnational communication, global journalism, cross-cultural, and intercultural communication (Melkote, Srivinas R., 2001). Development communication concentrated on the role of communication in social changes for all areas of the field, which has substantial differences in focus, emphasis, and scope, and each requires a complete explanation. Whereas the definition of development communication according to the World Congress on Communication for Development is a social process based on dialogue using various tools and methods including seeking change at multiple levels both listening, building trust, sharing knowledge and skills, building policy, debating and learning for sustainable and meaningful change (Servaes, Jan, Emily P., Song S., Danielle R., 2012).

This line of thought underlies how development communication determines the efforts of independence of persons with disabilities. The social change for the better can be achieved through a proper planning process by utilising infrastructure, including emphasising the connection with the use of media to achieve goals. The development of communication and information technology also leads to this process.

### ***The Paradigm of Persons with Disabilities***

Studies on disability began to develop in the 1980s. As proof of the initial recognition, in 1994, a separate Disability Study Program was established at Syracuse University (Knight, 2018). There are various paradigms for people with disabilities. According to the World Health Organisation (WHO), a disability is a limitation in a person's activities due to the underlying pathology and bodily disorders (O'Young, Bryan, James Gosney, 2019). People with disabilities are those who cannot act like ordinary people or people who cannot contribute much in national development like common people do (Keumala, 2016). Various terms also appear to refer to people with disabilities. Law Number 4 of 1997 uses the name disabled. In Chapter 1 Article 1, what is meant by a person with a disability is, "Anyone who has a physical and or mental disability, which can interfere or constitute an obstacle ... for him to conduct [himself] appropriately, which consists of physical disability, mental disability, or physical and mental disabilities." Other terms, like the disabled, are also often used.

Another definition is supplied in Law No. 19 of 2011 concerning Ratification of the Convention on the Rights of Persons with Disabilities (Convention on the Rights of Persons with Disabilities). The disabled are described as people who have physical, mental, intellectual, or sensory limitations for an extended long period time who have trouble interacting with their environment and community, or attitudes that make it difficult to participate fully and effectively based on equal rights. Law No. 19 of 2011 is a careful step of the Indonesian state in ratifying the UN CRPD (United Nations Convention on the Rights of Persons with Disabilities) by the House of Representatives of the Republic of Indonesia and is a positive

first step towards people with disabilities and in strengthening commitments to advance primary rights of the disabled. Besides, it is an effort to promote, respect, fulfil and protect the rights of persons with disabilities throughout Indonesia.

These existing regulations are no longer seen as in line with the paradigm of the needs of people with disabilities, so they are replaced with a new law, Law Number 8 of 2016 concerning with Persons with Disabilities. A disability is "Anyone who experiences physical, intellectual, mental, and or sensory limitations for a long time, who, when interacting with the environment can experience obstacles to participate fully and effectively with other citizens based on equal rights."

### ***Infrastructures for Persons with Disabilities***

December 2016 marked the tenth anniversary of the adoption of the Convention for the Rights of Persons with Disabilities by the United Nations. The passage has been accessed by 168 countries in the world to respect, protect and provide equal and fundamental rights for persons with disabilities. With the development of the digital age, information and communication technology offers new ways to fulfil commitments to people with disabilities as stated in the convention. Technology development for the unique needs of persons with disabilities is increasingly showing progress but is still general such as computers, tablets and smartphones. For example, blind people can read printed documents using cameras, audio, and text recognition using smartphones, wheelchair users can use the internet to access training at tertiary education institutions, and others. This example shows that ICTs can significantly change for people with disabilities (Caribbean, 2016). The study conducted from Uganda and Nigeria shows that creating various services in new and innovative ways for people with disabilities strengthens services and encourages paradigm shifts (Sally D Hartley, 2002).

### ***Smart Technology***

In recent years different smart technologies have been developed for people with disabilities. Smart technology includes a mechanical system with sensors, actuators, and programmable controllers, which allow the structure to adapt to unpredictable external conditions (Szulc, J. Holnicki, J. Motylewski, 2008). Scientifically in the field of Engineering or Information Systems, the concept of smart technology requires knowledge of the mechanical system itself. This system is embedded with sensors and control devices, and a group of electronics with integrated software, which increases the intelligence of the system. This paper discusses products within the category of smart technology designed for people with disabilities.

The types of smart technology for people with disabilities as reported by Darajingga (2018) include:

- a. Kenguru Electric Car: a particular car for wheelchair users. With a specific design, wheelchair users no longer need to move from a wheelchair because this car supports all its accessibility.
- b. Smart Belt: a belt equipped with a monitor which can send information via Bluetooth connected to a cell phone or computer owned by parents and caregivers. This device detects an increase in electrical conductivity in the skin and changes in respiratory rate when the user is having a seizure.
- c. Braille Smartphone: this phone uses a haptic touch screen and consists of a series of sophisticated small pins, which can move up and down to accommodate texts and images. This technology allows the blind to use maps, play games, and many more.
- d. Lucy 4 Keyboard: To use the keyboard, the user does not need to use hands so that physically disabled people do not need to feel any difficulty or fatigue when running the computer
- e. Eyeborg: a kind of "third eye" that can identify colours through sound, capable of detecting 360 different colours for its users.
- f. DynaVox's EyeMax: eye-tracking technology for accessing computers, watching tv, reading books. It allows users to operate the device just by staring or blinking
- g. Braille EDGE 40 Display: reads content that is on a computer screen and then converts it into braille characters.
- h. iBot Stair Climbing Wheelchair: Wheelchairs that allow users to be able to go up and down the stairs without the help of others.
- i. Bionic Arm: an artificial arm that helps the mobility of people who have amputations in the arm or hand.
- j. Google Glass: the application that recognises a person's facial expressions for people with autism.

### ***Universal Design for Person with Disabilities***

Other supporting facilities are needed to facilitate access for persons with disabilities. According to Clement and Shade, a universal design that combines the idea of inclusive access as a whole, including a computer with built-in features that allow access to people who are blind or physically limited, is needed to meet the needs of persons with disabilities (Clement, A., & Shade, 1996).

The definition of a universal design is "The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design". This means that universal design allows the product and the environment to be used by everyone and without the need for adaptation of the design both by the general public and people with disabilities (Persson, Hans, 2014). The principles of universal design are:

- a. Equitable Use: this design is useful and marketed to people with various abilities.

- b. Flexibility in Use: the design can accommodate a variety of individual preferences and abilities.
- c. Simple and Intuitive Use: the design is easy to understand, regardless of user experience, knowledge, language skills, and level of concentration.
- d. Perceptible Information: the design provides information effectively to users irrespective of environmental conditions and the user's sensory abilities.
- e. Tolerance for Error: the design minimises harms and adverse consequences, both intentional and unintentional.
- f. Low Physical Effort: the model is efficient and comfortable and with minimum energy expenditure.
- g. Size and Space for Approach and Use: Appropriate size and space that provides an approach, reach, manipulation, regardless of body size and mobility.

In real terms, various infrastructures designed with the concept of smart technology and universal design have been developed in multiple developed countries to facilitate persons with disabilities. Technology has an impact on socio-cultural changes in a society (Nuryanti, Subejo, Witjaksono, Istiyanto, & Fathoni, 2020).

## **Methodology**

Qualitative research has been used in this study. The research method used is a case study. As acknowledged by Neuman (2014), most case study research is qualitative. Cases consist of individuals, groups, organisations, movements, events, or geographical units. The data, in this case, is complete, varied, and broad and can be used at specific periods. Case studies are the result of conducting empirical and in-depth data mining of phenomena in real contexts (Neuman, 2014). This study is based on an in-depth investigation of community groups or events. In social science, it is a method of in-depth research involving a detailed explanation of each case that is the object of research. Data is gained by interviews and field observations. The study was conducted in the Special Region of Yogyakarta, Indonesia. Researchers conducted interviews with people with disabilities to find out information about studying with disabilities. Observations address supporting funding for disabilities in several public spaces such as shopping centres, campuses, roads, and several others. Data analysis is carried out in stages, and the steps taken include data reduction, data presentation, conclusion or verification (Milles, M. B., 1992). In this study, researchers gather data under the study design and try to map the relevant data to be presented as needed. Based on the analysis with appropriate references, conclusions can be drawn about the results of the study.

## **Result and Discussion**

### ***Facilities Provision for Disabilities Person***

Indonesia as a country is based on *Pancasila* as state foundation, which in its application always upholds human rights. Many efforts have been realised for equal rights for its citizens. In 2011, Indonesia ratified the Convention on the Rights of Persons with Disabilities, and in 2016 the Indonesian government passed a Disability Law which recognised the rights of persons with disabilities and gave them equal treatment with non-disabilities (Ernawaty, 2019). The existence of Law No. 8 of 2016 proves that the forms of government concern are not just stopping at the level of discourse but are implemented at the highest level in the way of regulations that guarantee the rights of persons with disabilities. The implementation is rolling in several levels of government programs. In 2018 international disability day carried the theme of "Empowering Persons with Disabilities and ensuring inclusiveness and equality" and it has become the national theme of "Indonesia Inclusion and Disability Friendly" (Ministry of Communication and Informatif, 2018). Until then, some implementations are autonomous in each region such as in the DKI Jakarta when the provincial government launched the Jakarta Disability Card (KPDJ) in August 2019 (Tambun, 2019). In Bogor, a Mobile Social Rehabilitation (SSR) activity was held to fulfil the rights of persons with disabilities both physically, mentally, socially, regarding the skills and opportunities necessary to develop their independence (BRSPDI, 2019).

Evidence of the Indonesian government's seriousness is clearly seen in the provision of infrastructure for persons with disabilities, which can be identified from several public services such as guiding blocks, lifts, and several public service facilities. Sidewalks are designed to be friendly for people with disabilities and others. In terms of quantity, it is still in a small percentage, and the supply also experiences various obstacles. For example, the concept of universal design is still relatively small, and applied smart technology is still limited.

**Figure 1.** Example of Provision for Facilities for Disabilities



**Source:** Personal Documentation, 2019

For the disabled, an atmosphere with disability-friendly supports is important, such as physical communication (attitudes, values, skills and knowledges) and resources in the form of picture-based communication tool, readable information, and effective signs. This all refers to the main concern of the unfulfilled needs of the disabled (non-inclusive), in addition to infrastructure access for the disabled (Dewi, 2019). Picture 2 shows citizens who do not have a concern for facilities for disabilities, including the provision of infrastructure.

Equal accessibility and opportunities for all people in the digital age have become increasingly important over the past few decades. The concept of accessibility becomes a significant consideration in developing interactive systems and requires a democratic foundation (Persson, Hans, 2014). Public awareness in respecting the existence of disabilities and maintaining available infrastructure is still a challenge in this country.

**Figure 2.** Unfriendly Infrastructure Design and Utilisation



**Source:** 2.a. solopos.com (20/11/19); 2.b. Personal Documentation, 2019

In addition to the environment, stigma has an impact on their survival. Stigma refers to some attributes in a person and not a label attached by someone else (Dalal, 2010). In this context, disability is not just a physical condition but includes ontology - the status of one's being. Stigma in this context is not a by-product of disability but is its very substance. Shame can be the root of development failures involving persons with disabilities. The general public assumes that the disabled is incapable of doing things as people without limitations do. According to Fine and Asch, five assumptions that form the basis of stigmatising persons with disabilities, include the following: (a) disability lies solely in biology, (b) the problem of persons with disabilities is caused by impairment, (c) persons with disabilities are "victims," (d) a limitation is central to self-conceptions, self-definition, social comparison in reference to groups of people with disabilities, (e) disability is identical to the needs of social assistance and support (Fine, M., & Asch, 1988).

This stigma has implications for their low participation in education, their reluctance to complete tasks in school so that their involvement in development becomes smaller than the ordinary person. Stigmas that exist in the general public, if left unchecked, will lead to discrimination. The vulnerability of people with disabilities will increase, and their impact will be more apathetic to the development. Protection of the disability limitation right to avoid bias is urgently needed.

Effectiveness of many types of facilities for persons with disabilities is described in table 2 below:

**Table 2:** The Effectiveness of Provided Facilities for Disability

<b>Types of Facilities</b>	<b>Purpose or Use</b>	<b>Effectiveness</b>
Lift/ Escalator	To help accessibility for a person with a disability when in multi-storey buildings	High
Trottoir (sidewalk)		
a. Guiding block	The pathway of guidance and guidance for persons with disabilities especially the visually impaired (blind); use yellow tiles with straight lines and round texture	Moderate
b. Ramp	To replace stairs for the elderly and people with disabilities to go to higher places (public transportation such as train and bus)	Moderate
c. Portal S	To protect wheelchair users; the portal shape is designed like the letter S which is made of stainless material and is located at the ends of the sidewalk	Moderate
Parking area	measuring 3.7 meters x 4.5 meters with a maximum distance to buildings as far as 60 meters	Moderate
Toilet with handrail	To help the person with disability to hold on to avoid slipping and falling in the bathroom	High

**Source:** Direct observation and in-depth interview, 2019

Based on table 2, many kinds of public facilities for persons with disabilities have not been used optimally. Lifts and toilets have been used effectively. While the sidewalks are still used for other activities such as selling by street vendors and other activities.

### ***Community Approach for Participation***

#### ***Role of Development Communication***

Development is a change that is done intentionally in a society to achieve better conditions in social and economic fields (Ramos, 1989). From a social science perspective, development has different emphases. Social scientists consider communication as one of the factors that influences the primary process in development. Communication is the centre of the development process, combining all other aspects in one form or another. Development communication is knowledge sharing which aims to reach a consensus for actions that take into account interests, needs, and capacities of all parties concerned (Servaes, 2002).

Problems with people with disabilities in Indonesia are relevant to the study of development communication. Diverse Infrastructures are available in various communities, but their utilisation is not fully recognised. This condition means that communication has an essential role in the process of building the sensitivity of community members for the disability

environment. Referring to Ngugi's statement, development communication refers to technology-based communication networks that cannot be separated from messages and content that tends to create a climate suitable for development. In this context, the role of development communication is facilitative, that is, it is a means of achieving development goals (Ngugi, 1995).

To optimise the disability-friendly environment, awareness of the community is required. Some communication programs can be promoted include persuasive campaign programs, and collaboration with various agencies. The process of building personal awareness in the communication approach can be done through various media such as banners, leaflets, brochures, posters, and public service advertisements. Besides, policies related to disability issues need to be communicated effectively through socialisation and policy communication at various levels. Public opinion, which could be improved through social mobilisation, is also an essential part in communicating the reality of development communication in the context of the dynamics of people with disabilities in Indonesia. Even synergy of many areas and the active participation of community members are the keys to success in this development program.

### ***Community Participation***

Engagement is an essential part of social change. Poststructuralist theory, postmodernism, communitarian together provide underlying assumptions related to participation strategies. Operationally, participation reflects the dominant paradigm of "participation as an approach". Attendance must recognise as a fundamental human right. This right is essential for developing individuals (Sosale, 2008). Development communication includes the role of communication elements involved in the development process both the messenger, the information itself, the media, and the recipient of the message. Practical communication skills enable people to participate successfully in interactions with other members of the community, and they have a social involvement in that community. When communication skills are sufficient, people can obtain needs, find desires, change information, and engage in social activities and fill social ethics needed in the community (Solarsh, 2017). Effective development communication can encourage community participation through appropriate development communication strategies.

Many people with disabilities can perform roles that support development. The opportunity to provide space for expression for them indeed becomes essential. They become part of the actors in development. The primary demand for society, in general, is how to change the community's stigma of the existence of persons with disabilities. The stigma that tends to be positive towards them will be able to influence confidence to participate actively in social change through development programs.

In feudal societies such as in India, there is democratic participation for significant changes in society, especially in the poor with disabilities (Dalal, 2010). The form of involvement which is then relevant to be applied in Indonesia as a democratic country, according to the writer, is participation with a community approach. According to Notonagoro in Muhni, (1997), the personality of the Indonesian people, whose philosophy of life is Pancasila, is open, friendly and together. Through a community approach, it is possible to have collegial participation in the development process. The media, in this condition, contributes to creating a participatory society. The presence of the media in development has various consequences so that the interests of persons with disabilities are ignored. In Servaes study, there are three significant consequences: the media creates a participatory society, the media benefit from specific classes, and the media creates development problems (Servaes, Jan, Emily P., Song S., Danielle R., 2012).

In the context of persons with disabilities, community participation begins with building a disability-friendly environment and not only at the physical level. Implementation starts from departing from social openness in the community environment, creating an appropriate climate that is disability-friendly, utilising the media to support their communication as well as their communication with others. The existence of infrastructure without the active participation of the community will be in vain and probably will not work well.

To maintain its sustainability is certainly not just the role of the government. According to Servaes, sustainable development can be achieved through two approaches, namely the balanced approach or reconciliation of traditional economic growth with an ecological and environmental coding and a philosophical or ideological approach that conceptualises civilization holistically (Servaes, Jan, Emily P., Song S., Danielle R., 2012). On this basis, holistic integration and synergy of various aspects of life in the community are essential to personality, family, and society existing in a common system in the community (Yessetova, Seluch, Latysheva, Shramko, & Starostin, 2020).

## **Conclusion**

Development communication in Indonesia has been carried out in various fields of life, one of which is a priority is people with disabilities. In the physical aspect, many infrastructures have been developed and specially designed for people with disabilities in developed countries. The reality is that the concept of smart technology and universal design, which is an infrastructure that allows affordable accessibility for persons with disabilities, is still considerably limited in Indonesia. The era of information and communication technology, which has implications for almost all levels of needs and aspects of people's lives, seems to be insignificant for the development of persons with disabilities. Knowledge related to sensitivity to the existence of



limitations is still not adequate. Based on an analysis of the reality in Indonesia, the conclusions are:

1. Provision of various disability-friendly infrastructures is essential in all communities and at various levels of life.
2. Development communication is fundamental part of efforts to build awareness of the sensitivity of community members to persons with disabilities.
3. The community approach is considered relevant to achieving sustainable development in the dynamics of people with disabilities—besides, the commitments from the government, the community, and related organisations.

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