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ERADICATING THE DIGITAL DIVIDE IN THE ASIA PACIFIC



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■ ABSTRACT

The continuity of technology development has brought changes in social and economic changes in society. At extensive, advanced technology emerged to help society access another new world called the digital world. Changes in society are natural, yet it also disrupts the current dynamics of socioeconomic development by deepening inequality. Moreover, digital inequality between individuals with different backgrounds prevents disadvantaged groups from exploring digital opportunities. This phenomenon, known as the digital divide needs to be excoriated to reach digital equity. The aim is to ensure all individuals and communities have the information technology capacity required for full participation in our society, democracy, and economy. These activities on reaching digital equity or digital inclusion are necessary to ensure that all individuals and communities, including the most disadvantaged, have access to, and use of, information and communication technologies (ICTs). Asia-Pacific is one of the regions where inequalities become the source of multidimensional issues. Digital inclusion can be measured primarily by these factors: 1) affordable, robust broadband Internet service; 2) Internet-enabled devices that meet the needs of the user; 3) access to digital literacy training; 4) quality technical support; and 5) applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration within generations. Digital Inclusion must evolve as technology advances and recognizes that access to, and use of, ICTs are essential to the participants within our society, democracy, and economy. Nonetheless, the condition allows citizens to find a holistic and adaptive solution to face this digital transformation — especially regarding the 'use' or 'skills.' Turning challenges into opportunities for the people to promote and empower themselves to acknowledge digital skills.

Keywords: Digital Divide, Digital Skills, Asia Pacific



■ BACKGROUND

The emergence of technology, especially the Internet, has brought us into a new wave of tremendous opportunities for advancing the social, economic, educational, and governmental development.¹ The Internet creates a new space called the digital world, which produces disruptions between the society known as digital inequality that has an even deeper and relatable meaning on inequality on social and economic aspects.² DiMaggio et al. then explain this digital inequality further on the socioeconomic inequality of those who can and cannot access ICT means.³ A second problem with the digital divide concept is its implication of a bipolar societal split. As Cisler argues, there is not a binary division between information haves and have-nots, but rather a gradation based on different degrees of access to information technology.⁴

Gaps in access and usage have been present since the invention of information and communications technologies (ICT) and, without question, digital divides will always exist. However, the rapid development of information society, which spurred by the growth of the Internet, has now accentuated their importance.⁵ Old challenges, such as differences in adoption, remain key hurdles to greater participation in the digital economy. At the same time, new divides also are emerging about as quickly as the development of technology.

■ INTERSECTIONALITY OF IDENTITY ON THE DIGITAL DIVIDE

The bottom line is that there is no binary divide and no single overriding factor for determining such a divide.⁶ ICT does not exist as an external variable to be injected from the outside to bring about specific results. Instead, it is a complicated manner into social systems and processes. From a policy standpoint, the goal of using ICT with marginalized groups is not to overcome a digital divide but rather to further a process of social inclusion. To accomplish this, it is necessary to "focus on the transformation, not the technology."⁷ In recognizing the historical value of the digital divide concept, understanding

intersectionality is needed to examine social spectrum and discrimination (it helped focus attention on an important social issue). While preferring to embrace alternative concepts and terminology that more accurately portray the issues at stake. There is an emerging body of evidence that those who suffer social exclusion, combinations of social disadvantages, such as inadequate skills, poor health, and low income, are likely as well to be excluded from the information society.⁸

A person who cannot access ICT because of the lack of skills and lack of digital infrastructure has three intersectional aspects that should be cleared by digital inclusion programs. This intersection on social-economic identity refers to the extent that individuals, families, and communities can fully participate in society and control their destinies. It is supposed to taking into account a variety of factors related to economic resources, employment, health, education, housing,

recreation, culture, and civic engagement.

It is widely presumed that access to ICT would bring about a society of better interaction, easy access to a broader body of knowledge, greater opportunity in obtaining learning, and higher productivity, resulting in higher standards of living, and intellectual enrichment. During the 1990s, researchers and policy experts also were aware of the existence of a digital divide. DiMaggio and Hargittai point out that the access they explained needs to be extended. Specifically,⁹ the broad, multifaceted approach they bring to bear on issues of digital access and equality needs to be applied not only in situations in which Internet penetration is high but also in cases in which it is low and just beginning. Indeed, it is precisely in such cases that the promotion of skills, social support, and autonomy, while carefully paying attention to the underlying purpose, can be most significant.





■ SOCIAL INCLUSION OF DIGITAL INCLUSION

Social inclusion is a matter not only of a fair share of resources but also of "participation in the determination of both individual and collective life chances."¹⁰ It encompasses the concept of socioeconomic equality but is not equal to it. There are ways that the poor can have fuller participation and inclusion, even if they lack an equal share of resources. At the same time, even the well-to-do may face problems of social exclusion because of political persecution or discrimination based on age, gender, sexual preference, or disability. The concept of social inclusion does not ignore the role of class but recognizes that a broad array of other variables help shape how class forces interact. Though a historical treatment of the term is beyond, one could argue that the concept of social inclusion reflects particularly well the imperatives of the current information era, in which issues of identity, language, social participation, community, and civil society have come to the fore.¹¹

Access and awareness on every intersection of socioeconomic remain fundamental barriers toward digital inclusion. At the same time, connectivity rates continue to improve, in large part, thanks to ubiquitous and cheap mobile devices. However, once connected, new questions emerge as to whether people can take advantage of their access and if they want to. The supply of relevant and useful content is only one aspect of the demand for it is equally crucial.

Digital inclusion is not an end goal but rather a means to create a socially, economically, and politically harmonious society. Therefore, it is essential to implement digital inclusion by not only stop at the digital space but to work beyond it. Furthermore, it is also to realize that the end goal of bringing real benefits to individuals who are in disadvantageous positions in society. The outcome is more important than an isolated view of digital inclusion.

Angela Siefer, a director in the National Digital Alliance has also stated five factors that could measure digital inclusion which are:¹²



Siefer's factors showed that tackling the digital divide could be done by fulfilling those five factors to banish the digital divide. The strategy to bridge the digital gap should go beyond offering public access and training. Given the rapid development of the information society, it has become more urgent to develop better strategies so that no one will be excluded from being useful members of their society and, thereby, become marginalized.

■ ASIA-PACIFIC AND ITS DIGITAL DIVIDE

Based on research conducted by Center for Digital Society, study shows that some mothers living in rural areas in Java, Indonesia find that owning a mobile phone complicates their life since they do not understand how to operate one.¹³ Even though mothers do not own mobile phones, their kids possess mobile phones to play games and not knowing or maximizing the function of digital technology. This finding then shows that there is a lack of parental education and supervision on kids while using mobile phones.¹⁴

The lack of parental education and supervision on kids indicates how crucial it is to educate kids while using digital technology. In 2019, UNESCO did extensive research on looking through digital competencies in the Asia Pacific, focusing on kids called Digital Kids Asia-Pacific (DKAP). DKAP explores five domains which are:



Domain 1: Digital Literacy

Digital Literacy refers to the ability to seek, critically evaluate, and use digital tools and information effectively to make informed decisions.

Competencies

1.1 ICT Literacy

The ability to manage and operate ICT hardware and software responsibly in digital environments to access and search for data, information, and content, and to utilize them

1.2 Information Literacy

The ability to seek, critically evaluate, and use digital information effectively to make informed decisions.

Domain 2: Digital Safety and Resilience

Digital Safety and Resilience refer to the ability of children to protect themselves and others from harm in the digital space.

Competencies

2.1 Understanding Child Rights

The ability to understand legal rights and obligations within the global and local context.

2.2 Personal Data, Privacy and Reputation

The ability to understand how to use and share personally identifiable information while being able to protect oneself and others from harm. Be able to implement strategies for information and device security and personal security protocols.



Domain 2: Digital Safety and Resilience

2.4 Digital Resilience

The ability to be preventative, reactive, and transformative, allowing young people to avoid or cope with the risky situations they face, and improve themselves.

2.3 Promoting and Protecting Health and Well-Being

The ability to identify and manage health risks, and use digital technology in order to protect and improve the physical and psychological well-being of oneself and others.

Domain 3: Digital Participation and Agency

Digital Participation and Agency refers to the ability to interact, engage, and positively influence society through ICT equitably.

Competencies

3.1 Interacting, Sharing and Collaborating

The ability to interact, share data and information, and collaborate with others using suitable digital technologies to achieve shared goals.

3.2 Civic Engagement

The ability and willingness to recognize, seek out, and act on opportunities to positively influence local and global communities online and/or offline through appropriate digital technology use.

3.3 Netiquette

The ability to demonstrate ethical and courteous behavior to inform choices in interacting and engaging with other people in different digital environments and with diverse audiences.

Domain 4: Digital Emotional Intelligence

Digital Emotional Intelligence refers to the ability to recognize, navigate, and express emotions in intrapersonal and interpersonal digital interaction.

Competencies

4.1 Self-Awareness

The ability to use introspection to explain one's moods, emotions, drives, and how these affect oneself and others in the digital context.

4.2 Self-Regulation

The ability to manage emotions, moods, and impulses during online engagements.

4.3 Self-Motivation

The ability to demonstrate initiative and a commitment to attain internal or external goals despite setbacks.

4.4 Interpersonal Skills

The ability to build positive online relationships to communicate, build rapport and trust, embrace diversity, manage conflicts, and make sound decisions.

4.5 Empathy

The ability to demonstrate awareness and compassion for the feelings, needs, and concerns of others during digital interactions.



Domain 5: Digital Creativity and Innovation.

Digital Creativity and Innovation refers to the ability of children to express themselves and explore through the creation of content using ICT tools.

Competencies

5.1 Creative Literacy

The ability to apply skills and use tools to create, adapt, and curate digital content.

5.2 Expression

The ability of a young person to use technology to represent or creatively express their identity.

Table 1. UNESCO Digital Kids Asia-Pacific Framework for Education¹⁵



These domains appear as fundamental, which then becomes mandatory for all digital users to understand five of the domains. Aside from the domains, the study posed various inquiries to assemble experiences on kids' experience, use, and access to the computerized world in four Asia-Pacific Countries (Bangladesh, Fiji,

Korea, Vietnam). The discoveries demonstrated that various types of advanced partitions existed. Advanced partitions showed in good manners for the overviewed understudies. A noteworthy bit of Bangladesh and Fiji understudies revealed that they had no entrance to any advanced gadgets.

In Bangladesh and Fiji, 8.5 percent of under studies and 7.1 percent of under studies separately did not approach any of computerized gadgets at home.¹⁶ Interestingly, the individuals who did not approach computerized gadgets at home in Korea and Vietnam dropped to 1.2 percent and 0.8 percent separately.¹⁷ Advanced partitions were likewise striking in school as every one of the four nations had a critical number of under studies with no entrance to the Internet at school (18–35 percent).¹⁸ Concerning contrasts in getting to, a higher number of young ladies than young men approached advanced gadgets at home and school, and a greater

extent of young ladies contrasted with young men in all the nations approached numerous computerized gadgets at home and school. One particular case was in Bangladesh, where double the extent of girls did not approach advanced gadgets in school contrasted with the boys.¹⁹

However, the report also shows some children in Asia-Pacific do not recognize and understand several domains, which might be indicated by the country's development itself and their parents' urgency on educating their children about these five domains.²⁰ Therefore, eradicating the digital divide within generations is crucial.





DIGITAL INCLUSION STRATEGIES IN THE ASIA-PACIFIC

After looking at what has been the core problem of the digital divide in Asia-Pacific, strategies on digital inclusion are needed to narrow down the gap of the digital divide. The strategies proposed are:

1. Hardware and software support in addition to accessibility

Given the significant drop in the cost of computing technology, more families can afford to install the equipment and have an internet connection at home. Thanks to various computer recycling and donation programs, many members of disadvantaged groups have also been able to use PCs at home, some with low-cost or even free temporary internet connections. Additionally, there are a growing number of access points in public, community facilities. Nevertheless, disadvantaged groups need hardware and software support as well as affordable repair and maintenance services. Without this, many stopped using the equipment when they encountered problems and could not get help. Many volunteers in the community would like to help solve these problems. However, better mobilization and coordination are needed to reach parts of Indonesia.

2. Design, more relevant content and applications

The disadvantages might need different designs, content, and applications that suit their needs and skills. However, they do not constitute a strong market force to attract commercial firms to produce products tailored to their requirements and purchasing power. In this respect, government interventions regarding direct provision, subsidies, and regulation are necessary. Many governments have made their websites barrier-free for persons with visual impairment and have provided computing aids for some persons with disabilities. The more significant effort needs to be done in these areas.

3. Educating, Training, and Organising

Education is one of the most effective ways to socialize curriculums and competencies. Tackling the digital divide by educating generations with a flexible yet contextual curriculum is needed, so the execution of the curriculum could be more personalized and advanced. Asia Pacific Curriculum for the Unconnected is then created to address this strategy by adopting EU's Basic digital competencies and the five domains mentioned before.²¹





Information Processing

Search Information using a search engine

Knowing that not all online information is reliable

Saving files, content (text, pictures, videos, web pages), and retrieving them after saving.

Communication

Communicate with others using a mobile phone, Voice over IP (e.g. Skype) e-mail or chat – using basic features (e.g. voice messaging, SMS, send and receive e-mails, text exchange)

Share files and content using simple tools

Use digital technologies to interact with services (as governments, banks, hospitals).

Aware of social networking sites and online collaboration tools.

Aware that when using digital tools, certain communication rules apply (e.g. when commenting, sharing personal information).

Content Creation

Produce simple digital content (e.g. text, tables, images, audio files) in at least one format using digital tools.

Make basic editing to content produced by others.

Know that content can be covered by copyright

Can apply and modify simple functions and settings of software and applications that I use (e.g. change default settings)

Safe

Can take basic steps to protect my devices (e.g. using anti-viruses and passwords)

Aware that my credentials (username and password) can be stolen.

Know that they should not reveal private information online

Know that using digital technology too extensively can affect my health

Take basic measures to save energy.

Content Creation

Can take basic steps to protect my devices (e.g. using anti-viruses and passwords)

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Take basic measures to save energy.

Training programs will also adapt to the curriculum, even though some training is already conducted. However, they are still in short supply regarding fitting the schedules of disadvantaged people. Social workers can help organize and mobilize leaders and users among the disadvantaged at the community level. If a critical mass of users can be established, it will be easier to attract others to use the technology in ways that relate to their modes of living and interacting with their peers. Organizing might additionally involve mobilizing disadvantaged groups to express their needs for better designs and applications, and more relevant content.

4. Monitoring results through program evaluation and digital divide measurement

Regular monitoring of the state of digital inclusiveness in society is vital so that observations can be made to determine whether progress has been made in the significant areas and among targeted disadvantaged groups. Also, programs designed to bridge the digital divide should include better evaluative models so that their impact can be ascertained with due consideration given to changes that might result from cohort or other effects.

5. Leveraging the input from commercial enterprises

Either in cash or kind, vendors, especially those in the ICT sector, have been making donations to help bridge the gap. It is also believed that overall service statistics generated by such an alliance and presented in a standardized format could be used to demonstrate the effectiveness and the impact of donations and would, therefore, help lobby for more donations.





■ CONCLUSION

The Asia Pacific, as a region that has layers of socioeconomic groups that create a more significant divide in the digital sphere, needs to be excoriated to reach digital equity. This Digital equity ensures all individuals and communities in Asia-Pacific have access to information technology which is required for full participation in our society, democracy, and economy which will support by digital inclusion programs and activities. The digital divide is not only a matter of the level of access to technology and material

infrastructure but also a broader range of factors that shape people's opportunities for adopting digital media, like family background, education, socioeconomic status, and age. Adoption goes beyond technology access per se, as it depends on people's awareness of the potential benefits of using media such as the Internet. In that sense, internet skills go beyond practical computer skills and require specific contextualized forms of digital competencies.



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ABOUT CFDS

Center for Digital Society (CfDS) is the research center established by the Faculty of Social and Political Sciences, Universitas Gadjah Mada. The institution is created under the concern over the contemporary dynamics of socio-political condition of the world that is accentuated by the impeccable influence of information technology. The phenomenon triggers the new patterns and complexities in the society, and thus requires new approaches in managing such complexities.

CfDS pledged to delve more on the study of contemporary digital society, including related issues surrounding the topic; such as the issues of smart city and urban development. The emphasis is then put on the utilization of technology to shape the society in becoming digitalized, as well as to bring solvency to social issues.

Vision

Solving Social Problem and Accelerating Prosperity through Indonesia Digital Society

Activities

1. Research and Development
2. Dissemination and Publication
3. Education and Policy Advocacy

Research Scopes

1. Digital Governance
2. Digital Economy
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