European Journal of Humanities and Social Sciences
Vol 4 | Issue 5 | October 2024
ISSN 2736-5522

RESEARCH ARTICLE

Digital Learning and Work Readiness among Marginalized Women

Clara Rosa Pudijiyogyanti Ajisuksmo*

ABSTRACT

In the era of information communication and technology, all aspects of human life are influenced by ICT. In general, the aim of this research is to identify the readiness of marginalized youth in relation to the use of ICT (knowledge, attitudes, and preferences) in the workplace. The research was conducted in three marginalized communities in three provinces in Indonesia, namely 1) Kalibaru in North Jakarta, 2) Getasan in Semarang Regency, Central Java, and 3) Sekotong in West Lombok, West Nusa Tenggara. This research applies a quantitative approach by conducting a household survey and a youth survey, and a qualitative approach by conducting a series of focus group discussions. The household survey participants were 220 families, and in the youth survey, the participants were 220 youth aged 18–29 years. Questionnaires are used in household and youth surveys. For FGD, an FGD protocol was developed. The results of this research indicate that youth unemployment is considered an important policy in Indonesia. Certification for internships is important to recognize the qualifications and skills of the employees trained and mentored in the company. In addition, considering the limited number of job opportunities in the market, the intense competition, and the limited skills and education of marginalized young people, it seems important to encourage young people to become entrepreneurs. Data obtained from the field shows that only one-third of the participants in this study had attended vocational courses or training provided by any training provider. One of the reasons is that the distance between where they live and the training location is far, while transportation costs are not covered by the training provider. Apart from that, parents also forbid teenagers, especially girls, from going far outside the village to take part in job training. This study shows that young people understand the existence of differences in gender treatment in the workplace. The difference lies in the position of the worker, the regulations, and the salary/wages given to the worker.

Men are expected to have higher positions, heavier work responsibilities, and higher salaries/wages than women. There are also gendered jobs, such as sewing and hairdressing for women, while technical jobs are reserved for men. The causes of this segregation are largely rooted in a patriarchal culture that places men as superior. This research shows that the participants have gadgets to communicate with each other. However, only a few of them use sophisticated gadgets to carry out online trading, which can be caused by a lack of knowledge and skills in digital trading and marketing, as well as online management and supply chains. This means that people have sophisticated gadgets just to communicate on social media and play games just to fill their time. They do not use it for economic activities.

Keywords: Digital learning, marginalized women, poverty reduction, work readiness.

Submitted: August 24, 2024

Published: October 20, 2024

10.24018/ejsocial.2024.4.5.565

Faculty of Psychology, Atma Jaya Catholic University of Indonesia, Indonesia.

***Corresponding Author:**
e-mail: clara.as@atmajaya.ac.id

1. Introduction

We are currently in an era of digital information and communication technology (ICT), which is changing rapidly, and its developments are difficult to anticipate. ICT has entered everyone's lives in

urban and rural areas, such as using cell phones for various activities. Society cannot reject the presence of ICT in their lives, and ICT influences all aspects of society's economic, social, and cultural life. According to Cummings and O'Neil (2015), ICT is a reflection of society and is considered a driving force for economic development in every country (Mogotlhwane *et al*., 2011; Richmond & Triplett, 2018). According to Heeks (2014), access to and use of ICT plays an important role in alleviating poverty in a country. ICT encourages poor communities to grow and improve their quality of life and welfare. In poor and marginalized communities, it is women who suffer the most, and in the ICT era, only a few women can access and have knowledge about ICT. In fact, ICT skills are one of the requirements for competing with job seekers (Bello *et al*., 2013; World Bank, 2013).

Information and Communication Technology (ICT) has a major impact on poverty alleviation by opening access to information, increasing economic opportunities, and increasing service efficiency. ICT creates direct employment opportunities in the technology sector (e.g., telecommunications, software development) and facilitates employment in related industries (e.g., e-commerce, digital marketing) (World Bank, 2013). According to Wu and Gereffi (2019), digital platforms enable small businesses and entrepreneurs to reach larger markets bypassing traditional barriers. E-commerce platforms help small businesses sell products internationally. ICT-based financial services, such as mobile money, provide access to banking services for people who do not have bank accounts, thereby enabling smoother savings, loans, and financial transactions (Ndung'u, 2021).

Adji and Rachmad (2018) explained that in alleviating poverty, the Indonesian government has various efforts and programs, which can be grouped into three:

1. The family-based integrated social assistance program is intended to meet basic needs to improve the family's quality of life.
2. A community empowerment program is intended to increase community awareness of their potential capacity to access facilities to improve their quality of life and actively participate in improving their quality of life.
3. The micro and small business empowerment program helps poor people access sources of financing to start and run small business opportunities, provides management skills training, and strengthens the business environment.

However, many stakeholders need support to achieve all planned programs.

2. Literature Review

2.1. Profile of the Study Location

Kalibaru sub-district is one of 7 sub-districts in Cilincing District, North Jakarta, which has an area of 2.47 km^2. Data for 2023 (Central Bureau of Statistics of North Jakarta City, 2023) shows that in Kalibaru, the number of households is 36,458, but as many as 9,456 families live in slum areas. Based on population age groups, the data shows that the number of people aged 15–64 years is the highest (334,732 people), compared to the number of people aged 0–14 years (102,502 people) and over 65 years (156,18 people). This shows that the majority of Kalibaru residents are an active and productive age group. Regarding educational facilities, the Kalibaru sub-district has 113 elementary schools, 48 junior high schools, and 31 senior high schools.

Getasan sub-district, with an area of 68.03 km^2, is one of 19 sub-districts in Semarang Regency, Central Java province. Data for 2024 (Central Bureau of Statistics of Semarang Regency, 2024) reports that the population in the Getasan sub-district is 53,920 people (26,792 women and 27,128 men). Data also showed that 177 people (69 male and 108 female) were registered as job applicants, and there were only 17 (9 male and 8 female) job placements. Regarding educational facilities, there are 13 elementary schools, 6 junior high schools, and 1 senior high school.

Sekotong sub-district, with an area of 34.42 km^2, is one of 10 sub-districts in West Lombok Regency, West Nusa Tenggara province. The population in Sekotong sub-district is 69,124 people (35,052 men and 34,072 women) or 9.17% of the total population of West Lombok Regency (Central Bureau of Statistics of West Lombok Regency, 2024). For educational facilities, there are 68 elementary schools, 25 junior high schools, and 14 senior high schools in the Sekotong sub-district. Natural disasters in the Sekotong sub-district included floods, earthquakes, and landslides.

2.2. ICT Literacy

The rapid development of ICT leads the world of education to prepare young people with knowledge and skills regarding ICT. ICT facilitates access to quality education through online platforms, enabling individuals in remote areas to learn new skills and improve their employability. This also helps lifelong learning and improving skills to gain economic opportunities (Hafifah, 2019). Access to computers,

smartphones, and the internet helps increase digital literacy, which is increasingly important for participating in the global economy (Aranda-Jan & Qasim, 2023; SMERU Research Institute, 2022).

ICT connects people globally, facilitating the exchange of ideas, collaboration, and the building of social capital. This can help marginalized communities integrate into the broader economy and access new opportunities (Urquhart *et al*., 2008; Zinbauer, 2007). In addition, ICT platforms enable communities to participate in decision-making processes, giving poor communities a voice in matters affecting their lives, thereby producing policies more aligned with their needs (Sharma, 2008). Although ICT can potentially reduce poverty, unequal access to technology can exacerbate inequality. Rural areas, low-income households, and marginalized communities may not have equal access to ICT infrastructure, resulting in a digital divide. The results of the SMERU Research Institute (2022) on Digital Skills Landscape in Indonesia report that 64% of internet users are concentrated in urban populations. The study also reported that 70% of villages in Indonesia's outermost and least developed regions had difficulty accessing the internet due to weak signals. Developing ICT infrastructure (e.g., internet connectivity, electricity supply) in poor and remote areas can be expensive and require sustained investment from governments and private sector partners.

ICT literacy is crucial for competing in work (Christian, 2022). The ICT literacy program aims to provide ICT knowledge and skills inclusively and fairly for all levels of society, especially children, women, and people with disabilities. ICT education for marginalized groups, including girls and women from poor communities, must place ICT-related interventions in a broader cultural and social context that frames education within the issues of these groups more generally (Wamala, 2012). Failure to do this may result in minimal or detrimental results from the program. Poor communities cannot fully feel the benefits of ICT without adequate digital literacy and skills. ICT is a powerful tool for fighting poverty, encouraging economic inclusion, increasing access to services, and creating new opportunities for marginalized communities (Wamala, 2012). However, to fully exploit its benefits, concerted efforts must be made to bridge the digital divide and ensure that everyone, regardless of location or income level, has access to the necessary digital infrastructure and skills (Adji & Rachmad, 2018).

2.3. Marginalized Women and Digital Technology

There are various problems that women face in order to live a decent life. Fapohunda (2012) states that poverty affects women because 70% of the population living in poor conditions are women. In family and community life, women have limitations in accessing facilities that support them in developing their abilities, such as education. Many studies report that easy access to education will reduce poverty, and supporting education for women will help girls improve their lives and the world simultaneously (Borgen Project, 2017).

ICT is one sector where women left behind men despite rapid ICT development. Cummings and O'Neil's (2015) study shows that ICT is an important resource for women's empowerment. ICT can significantly impact marginalized women by improving their access to information, economic opportunities, and essential services. This can also help empower them socially and politically. However, challenges such as the digital gender gap need to be addressed. ICT can build women's self-confidence, which will increase their economic power. In addition, Cummings and O'Neil (2015) stated that ICT can facilitate women to communicate with their peers online to exchange information and build solidarity as well as lobby decision-makers regarding various women's issues. Access and use of ICT can confront gender-based power relations.

The UN Women (2019) report shows that the fundamental obstacle for women to keep up with new technological developments is the education system, including training and learning strategies that equip women with the skills needed for the future labor market. Meanwhile, according to Yusrini (2017), traditional patriarchal culture is one of the factors that causes women to experience obstacles in accessing the facilities needed to develop their capacity. UNESCO reported that technology can help 5.3 million women become literate by 2020 (UN Women, 2022).

The Global Entrepreneurship Monitor (2017) shows that around 14% of women in Indonesia are entrepreneurs. Empowering women in information and digital technology can be one solution to reduce economic disparities among marginalized communities. It is conceivable that if marginalized communities know the use of digital information technology, it will provide opportunities to create activities that lead to economic improvement.

ICT gives women the opportunity to start and run online businesses. E-commerce platforms allow them to sell products and services beyond local markets, reaching national and global customers (IFC, 2018). Mobile banking and payment platforms, such as mobile money, give women access to financial services, enabling them to save, take out loans, and invest in businesses without relying on traditional banking, to which access may be limited (UN Women, 2019). ICTs also enable marginalized women to work remotely, whether as freelancers, virtual assistants, or online educators. This could be particularly

transformative for women in regions where cultural or logistical barriers limit their ability to work outside the home (UN Women, 2022).

Through social media and online communities, ICT allows women to connect with peers, mentors, and support networks. This social connectivity helps women share experiences, access information, and get support in overcoming cultural, social, or economic barriers (Basuki *et al*., 2015). ICT platforms give marginalized women a voice in public discourse, enabling them to participate in social and political movements, advocate for their rights, and engage with policymakers. This can help women overcome problems such as gender-based violence, discrimination, and legal gaps (Basuki *et al*., 2015).

2.4. Aims of the Study

In general, the aim of this research is to identify the readiness of marginalized women in relation to the use of ICT (knowledge, attitudes, and preferences) in the workplace. The specific objectives are: 1) assess the current employment status of young people, especially marginalized young people; 2) assess the work readiness of marginalized youth; 3) identify gender issues in marginalized communities, and 4) assess the digital learning readiness (knowledge, attitudes, preferences) of marginalized youth.

3. Method

This research was conducted in three marginal locations in Indonesia, namely a) Kali Baru Cilincing, North Jakarta; b) Getasan, Semarang Regency, Central Java; and c) Sekotong, West Lombok Regency, West Nusa Tenggara. This research applies quantitative and qualitative approaches. In quantitative studies, the Household Survey (HH) and Youth Survey (YS) were conducted using questionnaires developed by researchers to assess demographic characteristics, employment status, work readiness, gender issues, and work-related transformations.

A convenience non-random sampling technique was used in this research. In the HH Survey, the criteria for participants are households that have youth (men or women, aged 18–29 years, working or not working). HH survey participants were mothers, fathers, or adults living in the same household as the youth. The total number of HH Survey respondents was 202 HH (84.7% female and 15.3% male).

In YS, the participant criteria are young people (male or female, aged 18–29 years, working or not working) from selected households from the HH Survey. In the YS, the number of participants was 202 youth (51.99% women and 48.01% men) aged 18–23 years. More than half (68.32%) of youth who participated in this survey were aged 18–23 years. In detail, the number of participants in the three locations is as follows: Kali Baru 102 HH and 102 YS, Getasan 50 HH and 50 YS, and Sekotong 50 HH and 50 YS.

A series of Focus Group Discussions (FGD) were carried out in qualitative research. Protocols for FGD were developed to collect qualitative data. Access to ICT is measured by four indicators: having a mobile phone, using a mobile phone, using a computer, and accessing the internet. There were 10 FGDs (details: 3 in Jakarta, 4 in Semarang, and 3 in Lombok), and 72 people attended (46 women and 26 men).

Before data collection, ethical clearance for this research was obtained from the Center for Ethics Development, Atma Jaya Catholic University of Indonesia. The researcher also provided written and verbal informed consent to each participant in this study.

4. Results

4.1. Demographic Characteristics

A total of 202 households participated in the HH Survey, and more than half (n = 171; 84.7%) of the HH Survey participants were women. In this household, there are 867 family members, and based on the gender of family members, the data shows that the percentage of women is higher (n = 435; 50.2%) than the percentage of men (n = 432; 49.8%). Data from the HH Survey also shows that 58.9% of households have 4 to 5 family members. Even though the number is small, there are households that have 7 to 9 family members. Concerning the position of family members, about 55.6% (n = 482) were sons/daughters-in-law or grandchildren, and 23.3% (n = 202) were heads of household. About half of the family members (n = 438; 50.5%) in this household survey were unmarried.

Fig. 1 shows the employment status of family members. Around 39.1% of households have 2 working family members, and 35.1% have 1 working family member. Also, 36.2% are unemployed, and 13.3% are housewives. Fig. 2 shows the income of family members. The income of half (55.94%) of family members is less than IDR 1 million to IDR 2 million. Fig. 3 shows ICT access by family members. Access to ICT is measured by four indicators: having a mobile phone, using a mobile phone, using a computer, and accessing the internet. Therefore, one of the important questions asked in this survey

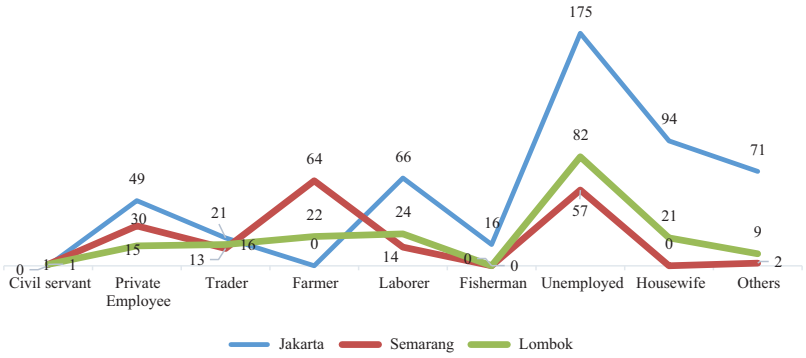

Fig. 1. Employment status of family members.

Fig. 2. Income of family members.

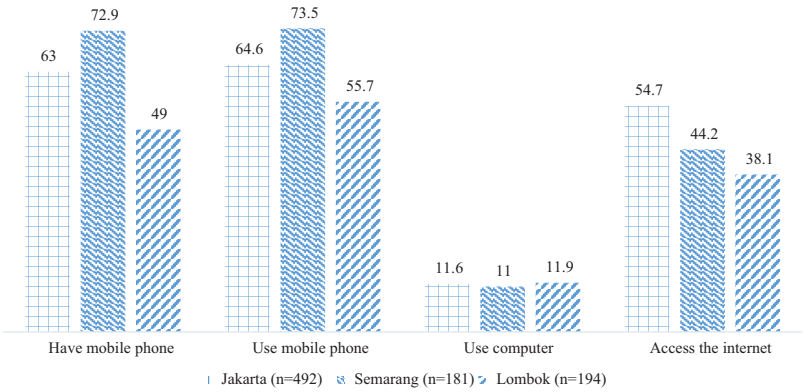

Fig. 3. Access to ICT by family members (in percentages).

is whether family members in the household have mobile phones and computers, use them, and can access the internet. The following image shows family members who can access ICT. Data shows that even though everyone has a cellphone, that does not mean they can access the internet.

The number of youth involved in the Youth Survey (YS) was 202 people, consisting of 51.99% female and 48.01% male. The percentage of female participants in Kalibaru, North Jakarta (n = 60; 58.8%) was higher than the percentage of female participants in Getasan Regency, Semarang (n = 24; 48%) and Sekotong, West Lombok (n = 21; 42%). Regarding educational background, only a third (31.7%) of family members in the three locations have completed senior high school/senior vocational school. There are 22.3% of family members who have never attended school and have not completed elementary school.

Regarding the educational background of the YS participants, the data shows that more than half (n = 122; 60.40%) have a senior high school or vocational school education. The data also shows that many YS participants had junior high school education (n = 46; 22.77%). Although the percentage is small, some participants did not complete elementary school (1.48%), and very few graduated from college.

Of the YS participants (n = 202), only a third (n = 70; 34.7%) stated they had attended vocational courses or training. Only 38 (18.8%) who took vocational courses or training (n = 70) received certificates from the course and training organizers. Participants take courses in foreign languages (English, Japanese), computers, sewing, office administration, accounting, entrepreneurship, multimedia, soft

skills, violence against women, babysitters, and others. The training providers were NGOs, private companies, private course providers, and so on. The cost of courses and vocational training participants attend varies between IDR 35,000 to IDR 12,000,000, and most of the training is paid for by parents.

4.2. Youth Employment

Data in Fig. 4 showed that 60.40% of the participants of the YS were unemployed or had no work. Only 34.7% of the youth who participated in YS said that in the last month, they were looking for a job. Those who did not look for a job (35.1%) said they helped the family do the house chores (44.6%). Some youths said they did not look for a job or do the house chores since they were still studying at school (14.9%). The result of YS indicated that three parties who play an important role in improving skills were "I My Self" (55.9%), school/educational institutions (44.1%), and courses/vocational training providers (21.3%).

The YS result showed that 66.7% of the youth in Kalibaru who participated in this survey were unemployed. The Youth of Kalibaru access the formal and informal employment sectors. Jobs in the formal sector include workers in franchise stores (minimarkets) and contract workers in nearby industries around Kalibaru. This condition is unfavorable and places young people in a vulnerable position. In general, new graduates are given priority to become contract workers, and the age limit is 18 to 25 years. This means that when they are 25 years old, they can no longer be contract employees and become unemployed. Contract workers are also vulnerable to becoming victims of unilateral termination of employment. Informal jobs accessed by Kalibaru youth include jobs related to the seaside environmental context, such as peeling shells/shrimp, cutting fish, catching fish, port porters/coolie, builders, street singers, online shops, and trading in traditional markets. This type of work is less feasible because it is in the informal sector.

Qualitative data shows that employment is still a big problem for the young generation in the Getasan sub-district. Formal work that is common around Semarang Regency, including that carried out by many Getasan youth, is working in the garment/textile industry. Based on FGD, it was revealed that the opportunity to work formally in the industrial sector is quite large. However, the problem is that work is contract-based and generally very dependent on the size or number of orders the company receives, which is unstable over time. Also, not many youths are interested in this job since the location is far from home and needs more expenses.

Regarding work in the informal sector, as a region whose economy is driven by the agricultural sector, working as a farmer is a logical job for young people in the Getasan sub-district. However, although some young people work in the agricultural and livestock sectors, they work more like freelance workers who help their families/parents. Other freelance work types include temporary tourism work in restaurants or outbound venues during weekends or high season. Some of the youth in the Getasan sub-district make baking cakes for home bakeries and cakes, porters/coolie, and assistants to builders.

The attractiveness of Sekotong's beaches and views encourage many domestic and foreign tourists to visit Sekotong. This makes the tourism industry (such as hotels, restaurants, and travel agents) the only commercial activity in Sekotong. However, the number of hotels and restaurants is not comparable to the number of job seekers. Commercial activities are unable to absorb the workforce, including young people. As obtained from FGDs with young people, it was revealed that job seekers' competencies do not meet job requirements. FGDs with youth also showed that many felt at home in their villages, so they were not motivated to leave the village to look for work. As a result, many young people, especially women, are unemployed.

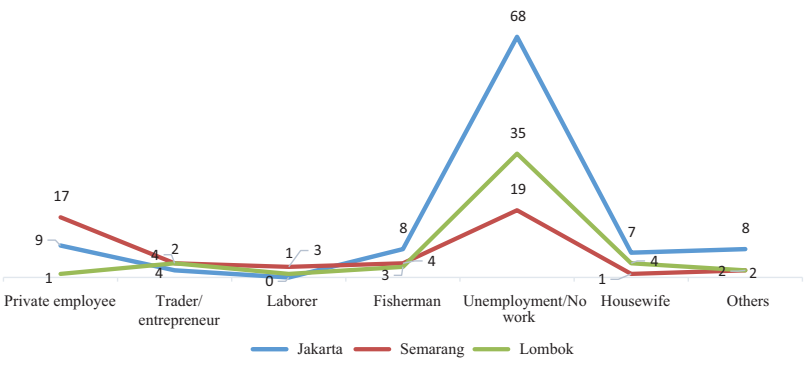

Fig. 4. Employment status of youth.

4.3. Work Readiness

The result of YS in Kalibaru showed that 77.5% (n = 79) of participants had never attended a course or vocational training. Only a small number of the younger generation (2%) have attended vocational courses or training. Referring to qualitative data, participants in the Kalibaru sub-district tend to emphasize socio-emotional aspects of work readiness. Male participants are confident in the technical skills they learned from formal education. According to them, it takes hard work to enter the world of work because the opportunities they aspire to are very limited; it does not matter whether they are skilled or not. The situation is slightly different for female participants. Even though they also stated they lacked the confidence to enter the job market, they should still compete with other job seekers. According to female FGD participants, senior high school graduates lack experience. They must compete with fellow high school graduates and college graduates to apply for the same positions. The competition is too fierce, and they are not tough enough to fight for the limited opportunities. However, this young woman is still motivated to learn new skills. They take free and paid courses just to open up more opportunities for them.

In terms of readiness to enter the job market, Getasan youth are open to various types of work. Referring to the interviews with representatives of the private sector or industry, the readiness most needed to work is not about skills or knowledge but about work ethic. These included a good attitude, willingness to learn, and teamwork, which was frequently expressed. Skills, whether working in a restaurant or a hotel, can be taught easily, but not the mentality. During the FGD, adolescent girls stated that they felt they lacked advanced specific skills. According to them, the theories and skills they learn in school do not match the standards needed in the real workplace. Meanwhile, for men, the technical skills they lack are more specific IT skills (more than just using gadgets and social media, including for trading) and business-related skills they need to develop. The situation appears worse for men, as reflected in the discussions. Most of them want to have their own business. However, they do not yet know what business they should develop.

Among youth, there are similarities regarding work readiness related to mental and soft skills readiness. They were eager to learn about teamwork, communication skills, and the like. Men are less interested in CV writing and interview preparation because they want to become entrepreneurs. They need more support to develop ideas and skills to become entrepreneurs, especially risk-taking management in running the business.

4.4. Gender Issues and Transformation

Data obtained from YS in the Kalibaru sub-district showed that 59.8% of survey participants said there were differences in treatment at work based on gender. The differences are in regulations (18.6%), position (18.6%), work facilities (7.8%), benefits and insurance (3.9%). Also, the burden and responsibilities of male workers are considered heavier than female workers. What is most widely felt is gender segregation in different types of work. From FGDs with the female group, it was revealed that they expected to work more in traditionally 'female' jobs, such as sewing and cooking. It is a job that is in accordance with their nature as women. The fields of computers, welding, and electronics are seen as men's fields that are unsuitable for women.

Regarding gender issues in the workplace in Getasan District, YS results show that 40% (n = 20) of youth in Getasan said there were differences in behavior in the workplace based on gender. Differences in behavior occurred in work positions (n = 11; 22%). Workload (n = 4; 8.0%). work regulations (n = 2; 1%). and salary (n = 1; 2%). In the FGD, it was revealed that there were differences in the types of tasks given to men/women in the minimarkets/shops where they worked. Apart from that, the problem is that it is more difficult for girls to get parental permission to take courses. For example, when offered free training by training providers in automotive and welding skills, even though women are interested, they do not get permission from their parents. Parents prefer that their daughters be trained in skills related to their feminine status.

Quantitative data from YS in the Sekotong sub-district indicated that 40% of the participants said there are different workplace treatments based on gender. The differences are in the job positions (22%), regulations (16%), and salary (2%). According to the FGD's participants, there is no difference in treatment between men and women accessing the labor market. The obstacles faced were more than the absence of permission from parents for their daughters to take courses or vocational training held far or outside their villages. Parents are worried that if their children live in the city, especially women will dress disrespectfully, engage in promiscuity, and eventually become pregnant. Parents think that improving their skills and working in the city away from their village do not guarantee good jobs or earn lots of money.

4.5. Digital Learning Readiness

As most young people today own and use gadgets, so do those in the Kalibaru sub-district. Some of them have businesses as online motorcycle taxi providers using their gadgets. Some young people also have advanced digital skills, such as uploading streaming material (on YouTube) and developing applications for mobile phones. Interestingly, some young women have accessed online tutorials to learn about interviews, CV writing, and psychological test preparation. Therefore, overall, especially for young people, digital learning is nothing new and is not considered capable of meeting their unmet needs to enter the world of work. Parents agree with teenagers' readiness to use digital technology. However, they expressed concerns over financial issues related to purchasing high-end gadgets and internet costs.

Referring to the FGD with youth in Getasan, it was indicated that young people have and use gadgets (mainly Android phones). They all access social media such as Facebook and Instagram and use WhatsApp to communicate. They also access YouTube, and even the boys learn skills from YouTube. So, it can be concluded that their digital learning readiness is ready. They are eager to learn new skills using digital technology. The only challenge is the availability and free internet connection. In villages where internet access is limited, young people take to the main road to access the internet. Apart from digital learning, parents suggest that there should also be face-to-face training because the younger generation still needs to communicate face-to-face.

Young people in Sekotong already have gadgets and are interested in using them to start businesses and carry out economic activities. However, as stated by the young women involved in the FGD, some do not know how to operate applications on their gadgets to start an online business. They understand that running an online business requires large capital and building trust and negotiation skills. Apart from that, strong motivation, self-confidence, and a willingness to get out of their comfort zone to face challenges are important internal factors in digital learning.

5. Discussion

In conditions of poverty, women are the group most disadvantaged, and this also applies to readiness for digital technology and the backwardness of women in the field of digital technology compared to men is closely related to their education (Cummings & O'Neil, 2015; Fapohunda, 2012; UN Women, 2019). Previous research shows that women are generally not allowed to pursue higher education. Women are seen as responsible for caring for the household and children and, therefore, do not need higher education (IESALC UNESCO, 2021). In fact, by being literate in digital technology, various studies show that women will find it easier to connect and exchange information with other groups of women to increase their knowledge. With digital skills, women will also become more confident in starting their businesses online (Basuki *et al*., 2015). Various previous studies have shown that if women are involved in economic activities, the family will become more prosperous, and indirectly, family welfare resulting from women's economic involvement will have a positive impact on children's welfare (Lorenza, 2022; Suwena *et al*., 2021; Zunaidi & Maghfiroh, 2021).

Referring to the results of the discussion in this research, it is shown that the young people who participated in this research realized that the party who most determines their readiness to learn digital technology is themselves. The Self is regarded as the main and core essence that plays the most role in increasing the knowledge and skills to be ready to work. The Self is also the most decisive party in getting a job after graduating. This aligns with the research results of Olofsson *et al*. (2019) and Smith and Storrs (2023), which show that digital competence is an important aspect of digital learning. This means that in educational activities, teachers and schools should prepare students to master digital technology technically and cognitively. However, they also stated that the family, community, and government have an important role in facilitating and supporting their digital technology learning activities. The government should provide facilities by providing adequate internet network infrastructure so that all parties can easily access the internet in this technological and information development era (Timotheou *et al*., 2023).

Only one-third of the participants of this study ever attended courses or vocational training provided by any training providers. There are some reasons for not attending courses or vocational training. First, the distance between the residence and the training place is far apart, whereas the training provider does not bear transportation costs. Parents must pay extra for transportation costs to the training center. This seems to be a burden on parents. Second, parents forbid their youth, especially girls, from going far outside the village to take on job training. Parents fear their children will be affected by the lives of city teenagers who are not in accordance with the culture in their village. The result of the study showed that schools or educational institutions, both formal (high school and vocational high school) and non-formal (courses and vocational training skills providers), must

provide young people with knowledge and skills related to ICTs. In addition to ICTs, it is also very important for educational institutions to provide young people with knowledge of digital commerce, including supply chain management, internet marketing, online transaction processing, and data management systems. Knowledge and skills in ICTs and digital marketing are very relevant and essential. However, as the International Labour Organization (ILO, 2018) and Trivedi and Patel (2023) reported, empowering youth to succeed in their jobs is not enough just to provide them with vocational skills. It is also important for the youth to be equipped with various related soft skills, such as vision setting, problem-solving skills, negotiating and communicating skills, understanding customer characteristics, building customer trust, and leadership. International Labour Organization (ILO, 2018) also showed that the Indonesian youth must be equipped with strategic thinking, foreign language, innovation, and creativity to succeed in their jobs. Related to the rapid growth of ICTs, the relevant stakeholders need to understand what is needed.

Acknowledgment

We acknowledge the contribution of all participants of this study, namely youth, parents, local leaders, government officers, and private sectors in three research sites: Kalibaru Cilincing sub-district, North Jakarta, Getasan sub-district, Semarang Regency Central Java, Sekotong sub-district, West Lombok Regency, East Nusa Tenggara who gave their valuable time to the researchers to get information that helped shaped the report of this study. The information provided is really helpful in giving an overview of youth employment, youth work readiness, and gender issues, especially for women related to information communication and technology.

Conflict of Interest

The author declares that they do not have any conflict of interest.

References

Adji, A., & Rachmad, S. H. (2018). Indonesia poverty reduction strategies: Shifting policies to promote employment in the poorest four deciles. *Economics and Finance in Indonesia*, *63*(1), 13–25. https://doi.org/10.47291/efi.v63i1.566.

Aranda-Jan, C., & Qasim, Q. (2023). *Increasing Access to Technology for Inclusion* (Report). World Bank Group. https://documents1.worldbank.org/curated/en/099631003072338051/pdf/IDU1116c98a914ebc14dc31a47a1495a00553bae.pdf.

Basuki, Y., Akbar, R., Pradono, P., & Miharja, M. (2015). ICT and social relationship engagement: Women's online communities in Indonesia. *Procedia—Social and Behavioral Sciences*, *184*, 245–251. https://doi.org/10.1016/j.sbspro.2015.05.086.

Bello, H., Shu'aibu, B., Saud, M. S., & Buntat, Y. (2013). ICT skills for technical and vocational education graduates' employability. *World Applied Sciences Journal*, *23*(2), 204–207. https://doi.org/10.5829/idosi.wasj.2013.23.02.588.

Borgen Project. (2017, December 3). 4 reasons why women's education leads to less poverty. *Borgen Project*. https://borgenproject.org/4-reasons-why-womens-education-leads-to-less-poverty.

Central Bureau of Statistics of North Jakarta City. (2023). *Kecamatan Cilincing dalam angka 2023*. Central Bureau of Statistics of North Jakarta City.

Central Bureau of Statistics of Semarang Regency. (2024). *Kabupaten Semarang dalam angka 2024* [Semarang District in Figures 2024]. Central Bureau of Statistics.

Central Bureau of Statistics of West Lombok Regency. (2024). *Kabupaten Lombok Barat dalam angka 2024* [Lombok Barat District in Figures 2024]. Central Bureau of Statistics.

Christian, A. (2022, September 23). Why digital literacy is now a workplace non-negotiable. *BBC*. https://www.bbc.com/worklife/article/20220923-why-digital-literacy-is-now-a-workplace-non-negotiable.

Cummings, C., & O'Neil, T. (2015). *Do Digital Information and Communications Technologies Increase the Voice and Influence of Women and Girls? A Rapid Review of the Evidence* (Report). ODI. https://www.odi.org/publications/9499-do-digital-information-and-communications-technologies-increase-voice-and-influence-women-and-girls.

Fapohunda, T. (2012). Women and poverty alleviation in Lagos, Nigeria. *British Journal of Humanities and Social Sciences*, *3*(2), 87–99.

Global Entrepreneurship Monitor. (2017). *Women's Entrepreneurship 2016/2017 Report* (Report). The Fenway Group. https://www.gemconsortium.org/report/gem-20162017-womens-entrepreneurship-report.

Hafifah, G. N. (2019). Information and communication technology (ICT) in English language teaching. *Proceedings of MELTC (Muhammadiyah English Language Teaching Conference), Department of English Education, The University of Muhammadiyah Surabaya*, pp. 21–36. https://core.ac.uk/download/pdf/229574767.pdf.

Heeks, R. (2014). *ICTs and poverty eradication: Comparing economic, livelihoods, and capabilities models* (Development Informatics Working Paper no. 58). Centre for Development Informatics, Institute for Development Policy and Management, SEED, University of Manchester. https://doi.org/10.2139/ssrn.3438433.

IESALC UNESCO. (2021). *Women in Higher Education: Has the Female Advantage Put an End to Gender Inequalities?* (Report). UNESCO. https://www.iesalc.unesco.org/wp-content/uploads/2021/03/Women-Report-8032021.pdf.

IFC. (2018). *Women and e-commerce in Southeast Asia* (Report). International Finance Corporation. https://www.ifc.org/content/dam/ifc/doc/mgrt/202105-digital2equal-women-and-e-commerce-southeast-asia.pdf.

ILO. (2018). *Powering up Indonesian Youth through Soft Skills Enhancement* (Report). International Labour Organization. https://www.ilo.org/resource/news/powering-indonesian-youth-through-soft-skills-enhancement.

Lorenza, D. G. (2022). The role of women's participation in development: Empirical evidence from Indonesia. *Journal of Economics Research and Social Sciences*, *6*(2), 124–130. https://doi.org/10.18196/jerss.v6i2.15322.

Mogotlhwane, T. M., Talib, M., & Mokwena, M. (2011). Role of ICT in the reduction of poverty in developing countries: Botswana as evidence in the SADC region. In H. Cherifi, J. M. Zain, & E. El-Qawasmeh (Eds.), *International Conference on Digital Information and Communication Technology and Its Applications (DICTAP), Part II*, Springer-Verlag, pp. 642–653.

Ndung'u, N. (2021). *A Digital Financial Services Revolution in Kenya: The M-Pesa Case Study* (Report). African Economic Research Consortium. https://aercafrica.org/old-website/wp-content/uploads/2021/03/AERC-MPesa-Case-Study.pdf.

Olofsson, A. D., Fransson, G., & Lindberg, J. O. (2019). A study of the use of digital technology and its conditions with a view to understanding what 'adequate digital competence' may mean in a national policy initiative. *Educational Studies*, *46*(6), 727–743. https://doi.org/10.1080/03055698.2019.1651694.

Richmond, K., & Triplett, R. E. (2018). ICT and income inequality: A cross-national perspective. *International Review of Applied Economics*, *32*(2), 195–214. https://doi.org/10.1080/02692171.2017.1338677.

Sharma, B. (2008). *Voice, Accountability, and Civic Engagement: A Conceptual Overview* (Report). Overseas Development Institute. https://www.undp.org/sites/g/files/zskgke326/files/publications/2008_UNDP_Voice-Accountability-and-Civic-Engagement_EN.pdf.

SMERU Research Institute. (2022). *Digital Skills Landscape in Indonesia: SMERU Research Report No. 2* (Report). SMERU Research Institute.

Smith, E. E., & Storrs, H. (2023). Digital literacies, social media, and undergraduate learning: What do students think they need to know? *International Journal of Educational Technology in Higher Education*, *20*, 1–19. https://doi.org/10.1186/s41239-023-00398-2.

Suwena, K. R., Irwansyah, M. R., & Suwendra, I. W. (2021). Women's role in family economic resilience: Study on female farmers in Songan Village. *Proceedings of the 6th International Conference on Tourism, Economics, Accounting, Management, and Social Science (TEAMS 2021)*, Atlantis Press, pp. 191–197.

Timotheou, S., Miliou, O., Dimitriadis, Y., Sobrino, S. V., Giannoutsou, N., Cachia, R., & Monés, A. M. (2023). Impacts of digital technologies on education and factors influencing schools' digital capacity and transformation: A literature review. *Education and Information Technologies*, *28*(6), 6695–6726. https://doi.org/10.1007/s10639-022-11431-8.

Trivedi, V., & Patel, V. (2023). Empowering youth: Building a strong foundation for tomorrow. *Vidya: A Journal of Gujarat University*, *2*(2), 118–120.

UN Women. (2019). *Leveraging Digital Finance for Gender Equality and Women's Empowerment* (Report). United Nations. https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2019/Leveraging-digital-finance-for-gender-equality-and-womens-empowerment-en.pdf.

UN Women. (2022). *Innovation and Technological Change, and Education in the Digital Age for Achieving Gender Equality and the Empowerment of All Women and Girls: Expert Guidance and Substantive Inputs to Preparations for the 67th Session of the Commission on the Status of Women* (Report). United Nations. https://www.unwomen.org/sites/default/files/2023-02/230213%20BLS22613%20UNW%20CSW67.v04%20%282%29.pdf.

Urquhart, C., Liyanage, S., & Kah, M. M. (2008). ICTs and poverty reduction: A social capital and knowledge perspective. *Journal of Information Technology*, *23*(3), 203–213. https://doi.org/10.1057/palgrave.jit.200012.

Wamala, C. (2012). *Empowering Women through ICT–Spider ICT4D Series No. 4* (Report). SPIDER and Stockholm University. https://bcwt.bg/wp-content/uploads/documents/EmpoweringWomen.pdf.

World Bank. (2013). *ICTs are Creating New Jobs and Making Labor Markets More Innovative, Inclusive, and Global–World Bank Study*. World Bank. https://www.worldbank.org/en/news/press-release/2013/09/10/icts-are-creating-new-jobs-and-making-labor-markets-more-innovative-inclusive-and-global-world-bank-study.

Wu, X., & Gereffi, G. (2019). Amazon and Alibaba: Internet governance, business models, and internationalization strategies. *International Business in the Information and Digital Age*, 327–356. https://doi.org/10.1108/S1745-886220180000013014.

Yusrini, B. A. (2017). Tenaga kerja wanita dalam perspekif gender di Nusa Teggara Barat [Female workforce in gender perspective in West Nusa Tenggara]. *Al Maiyyah Media Transformasi Gender dalam Paradigma Sosial Keagamaan*, *10*(1), 115–131. https://ejurnal.iainpare.ac.id/index.php/almaiyyah/article/view/452/342.

Zinbauer, D. (2007). *What can Social Capital and ICT do for Inclusion?* (Report). Office for Official Publications of the European Communities. https://publications.jrc.ec.europa.eu/repository/handle/JRC36181.

Zunaidi, A., & Maghfiroh, F. L. (2021). The role of women in improving the family economy. *Dinar Jurnal Ekonomi dan Keuangan Islam*, *8*(1), 61–79. https://doi.org/10.21107/dinar.v8i1.10581.