

# ICT competence and Self-Efficacy of The disabled in Indonesia

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## Article Info

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## Abstract:

Disability welfare could be improved with the use of Information and Communication Technology (ICT). The Government of Indonesia seeks to improve ICT disability competencies with the implementation of the ICT Jamboree. ICT competency enhancement is expected to increase the disabled self-efficacy in entering the workforce. This study aims to identify the impact of increasing ICT competencies on disability self-efficacy in daily life. Qualitative approach with interviews and Focus Group Discussions were carried out for data collection in this research. Interviews were carried out among 100 people with disabilities those who are deaf, blind, and physical disabilities who had participated in the ICT Jamboree. The selected informants came from five major cities in Indonesia, namely Palembang, South Sumatra Province, Yogyakarta City, Special Region of Yogyakarta Province, Balikpapan City, East Kalimantan Province, Manado City, North Sulawesi Province and Jayapura City, Papua Province. The FGD was also carried out with experts and people with the disabled who work with the government institutions or the entrepreneurs. The results of the study found that increasing ICT competence can increase disability self-efficacy. Most disabled claim to be more confident in using Microsoft Office application and interacting socially with non-disabled people through social media. Likewise, one of the keys to success in enhancing ICT competence and self-efficacy is the role of the disability community, teachers, and parents.

**Keywords:** *ICT Competencies, self-efficacy, disable.*

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## I. INTRODUCTION

In free countries, people with disabilities have equal opportunities as other citizens to improve their social ability and welfare. Indonesia has ratified the rights and opportunities for people with disabilities initiated by six United Nations agencies in the UN Partnership to promote the Rights of People with Disabilities Multi-Donor Trust Fund (UNPRPD) in November 2011. The government is trying to fulfill equal rights and opportunities for people with disabilities with the issuance of Law Number 8 of 2016.

Under this law, people with disabilities are protected by the state including Life Rights; the right to be free from stigma; privacy rights; the right to justice and

legal protection; education rights; and employment, entrepreneurship, and cooperatives rights. In Article 53, it is mentioned that both public agencies and non-public (private) agencies are required to employ disability groups of at least 2 percent and 1 percent of the total number of employees or workers. Apart from establishing regulations, the Indonesian government continues to provide tangible programs so equal rights can be manifested for disability groups. On October 31, 2017, as many as 14 Mayors from various cities in Indonesia signed the 'Charter of the Indonesian Mayor's Network for Inclusive Cities' at a high-level meeting of Mayors. The charter is a form of commitment of the Regional Leaders to respect and support the inclusiveness or

involvement of people with disabilities in all aspects of life in these cities[1]. Based on data from the Central Statistics Agency (2015), the number of people with disabilities (functional difficulties), age over 10 years, in Indonesia reached 8.56 percent. The disabilities in question include: visual impairment, hearing impairment, walking difficulty, difficulty in using / moving hands / fingers, difficulty in remembering or concentrating, behavioral and / or emotional disorders, difficulty in speaking and / or understanding / communicating with others, and difficulty in taking care of onself. The highest percentage, which is above 10%, is in the area of North Sulawesi Province where 11,90% are disabled with 88.10% are not disabled; Gorontalo Province, 11.71% disabled with 88.29% are not disabled; Central Sulawesi Province, namely 11.44 are disabled with 88.56% are not disabled; and South Sulawesi Province, with 10.22% disabled and 89.78% are not disabled. Meanwhile, the National Labor Force-Sakernas- survey data as of February 2017 stated that nationally, the working-age population with disabilities (over 15 years) is approximately 21.9 million, in which 51.18 percent or the equivalent of 11.2 million people with disabilities have entered the workforce (age 15-64 years). From the total of workforce, around 10.8 million are already working, while another 414 thousand are categorized as open unemployment [2]. In the current information age, Information and Communication Technology (ICT) is an enabler for people with disabilities to sharpen and explore their competencies so it will lead to an increase in welfare in all walks of life, equal to non-disabled. In 2012, several world institutions such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), International Disability Alliance (IDA), and International Telecommunication Union (ITU) pioneered a framework for empowering people with disabilities by using ICT approaches through ICT Opportunity for people with disabilities -inclusive of the Development Framework. ICT have developed in such a way so it is more accessible to people with

disabilities. Various accessible ICT content and applications are available to support people with disabilities in carrying out their daily activities so as to increase confidence in entering the workforce.

The Ministry of Communication and Information as a government agency overseeing the field of ICT, has the responsibility in ensuring that every Indonesian citizen receives equal rights, especially the right to obtain knowledge and training in the field of ICT. The government views people with disabilities as human resources whose potential and strengths must be developed. With the use of ICT, it is also hoped that it can improve self-efficacy (self-confidence) of ICT Jamboree disabled participants to live independently in the workforce. Through self-efficacy, people with disabilities can be more confident in their abilities so as to be equal to the non-disabled.

ICT Jamboree is an embodiment of government obligations in educating and improving the welfare of the community, especially people with disabilities as stated in Article 23 (c) of Law number 8 of 2016 namely "People with disabilities have the right to receive training and assistance to live independently". The ICT Jamboree executive committee is a collaboration between the HR Research and Development Agency and the Ministry of Communication and Information Technology Provider and Management of the Ministry of Communication and Information Technology (BP3TI). The ICT Jamboree is an arena to unite young people with disabilities (youth and adults) from 34 provinces in Indonesia. This activity was first carried out in 2016 in five major cities in Indonesia, namely Ambon, Padang, Makassar, Banjarmasin, and South Tangerang (National ICT Center). The ICT Jamboree activity is in the form of ICT training which is expected to be able to increase the utilization of ICT business opportunities for people with disabilities (Hutabarat, 2016). 2017 is the second year of the ICT Jamboree for people with disabilities. In the mentioned year, the location of the ICT Jamboree was upgraded to seven cities: Jayapura, Balikpapan, Manado, Palembang,

Yogyakarta, South Tangerang (National ICT Center) and Jakarta.

At present, ICT competencies are much needed by the industry. For this reason, the implementation of the ICT Jamboree also adjusts these competency needs, hence people with disabilities can be ready to enter the workforce. The concept of ICT Training and Competition in Jamboree 2017 has changed. In 2016, the ICT Jamboree has provided training which adopted the Global ICT Challenge for Youth with Disabilities (GITC). So in 2017, the series of activities in the ICT Jamboree training was adjusted to the SKKNI which is tailored to the needs of the people with disabilities. The training materials provided include: basic Microsoft Office (Excel, Word, Powerpoint), Internet, Graphic Design, and Public Speaking. In addition to the training, ICT Jamboree activities also held competitions which were divided into two parts, namely individual and group competitions with different categories. Individual competitions consisted of six categories, namely: the Internet category; Interactive Short Story; Promotional Flyer; Ms Excel & Word; Photoshop; and Public speaking. While for the group competition consisted of the category of Presentation Design and Poster Design [3].

The ICT Jamboree activity motivates the physically limited participants to improve their skills in the ICT field which is expected to increase their self-efficacy to compete with non-disabled workers in the workforce. Likewise, people with disabilities can also explore their potency by utilizing ICT so it can increase the society participation both social, cultural, economically, and developmentally. With high self-efficacy, people with disabilities are expected to be more independent so they will be able to work in line with non-disabled people with in accordance with industry needs.

Referring to the afore mentioned, a number of research questions were formulated as follows: (1) How is the effectiveness of the implementation of ICT jamboree for people with disabilities in improving self-efficacy? (2) What are the factors

influential to the increase of self-efficacy of people with disabilities in increasing ICT competency?

Based on the research questions above, the objectives of this study are as follows: (1) To identify the effectiveness of the implementation of ICT jamborees with the disabled in improving self-efficacy (2) To identify the factors which influence the increase in self-efficacy of people with disabilities in increasing ICT competence.

The criteria for selecting informants in the 2016 and 2017 ICT Jamboree were people with disabilities aged 15-25 years (teenagers) and 26-35 years (adults). The disabilities are limited to sight disability (visually impaired), hearing impairment (deaf / hearing disability), and physical difficulties (physical disability). The locations chosen were Palembang, South Sumatra Province, City of Yogyakarta, D.I.Y Province, Balikpapan, East Kalimantan Province, Manado, North Sulawesi Province and Jayapura, and Papua Province. The selection of these five cities was purposively chosen due to the reason these five cities had hosted the ICT Jamboree for people with disabilities.

When measuring the effectivity of the implementation of the ICT Disability Jamboree, which had been adopted and developed from the concept of the training effectivity from Kirkpatrick & J. Kirkpatrick (2006) it was revealed that training evaluation is an effort to systematically collect information to measure training results based on the information [4]. The training evaluation should be designed in conjunction with the training design, based on the formulation of objectives to be achieved. This model consists of four different levels for training evaluation, namely: (1) The first level of "Reaction" is the level to measure the level of participant satisfaction concerning the implementation of the training. Indicators used as reference for measurement includes: facility materials, and HR instructors. (2) The second level of "Learning" is to measure whether participants can understand the material given by the instructor. (3) The third level of "Behavior" is to determine changes in the behavior of the participants from the

aspects of knowledge, skills and attitudes, taught after training. (4) The fourth level "Result" is to determine the impact of training on individuals for work groups.

Bandura (1977) outlines four sources of information used by individuals to assess their self-confidence, namely mastery experience (performance accomplishment), vicarious experiences, verbal persuasion and physiological feedback (emotional arousal) [5]. Self-efficacy as one of the basic concepts of social learning theory is one's belief in one's ability to succeed in certain situations [6]. Bandura (1997) defines self-efficacy as a person's assurance in his ability to complete a task. Someone will be able to optimize their potency if self-efficacy supports the person in order to achieve it. According to Bandura (1997), a collection of past memories will be a determinant of self-efficacy through cognitive representations, including: recollection of the frequency of successes and failures, its temporary patterns, and situations where successes and failures occur [6].

Thinking ability also affects self-efficacy. The stronger the intelligence tends to heighten the recollection capability thus it tends to acquire high self-efficacy (Kumar & Lal: 2006). The theory of self-efficacy (Bandura, 1997) shows a connection between potency and self-efficacy. A person's potency is unlikely to reach the optimum if they do not have high self-efficacy [6]. Self-efficacy is what a person believes he can achieve by using his expertise in certain circumstances. Self-efficacy has been considered as a task-specific version of self-esteem [6]. Self-efficacy refers to a person's perceived ability to do something for oneself and be successful [6].

The basic principle behind the Self-Efficacy although it has a high ability potency, it's useless without self-efficacy. Therefore, it is appropriate for this study to use the theory of self-efficacy. Independency and equality of people with disabilities with non-disabilities will not be attained if people with disabilities do not have high self-efficacy [7]. The Positive psychology of the disabled

can improve education and the workplace as well as how it can promote onward in day-to-day life [8].

Theory is, individuals are more likely to engage in activities which have high self-efficacy and are less likely to engage in activities in which they do not participate in [9]. The power of self-efficacy refers to the amount of belief a person has concerning successful performance at various levels of difficulty [10]. The basic idea behind the Self-Efficacy Theory is that performance and motivation are partly determined by how effectively people believe they can [11]. Strong confidence has been recognized in development research as a component of resilience and assets that help encourage healthy development [12].

Gawith (1995) states that a person cannot perform certain tasks for which he has the ability to, unless he has the confidence to do so [13]. Self-efficacy beliefs are important aspects of human motivation and behavior and affect actions which can affect one's life. Bandura (1995) explains that it refers to belief in one's ability to organize and carry out the actions needed to manage prospective situations [14]. Research has shown a connection between students' self-confidence and positive postsecondary educational outcomes, such as high average rates and persistence [15–18], and specifically for completion rates and grades in the fields of Science, Technology, Engineering, Math-STEM [19–21].

Previous research has found that self-efficacy beliefs among STEM students with disabilities can be forged and have a mutually influential relationship with academic success and persistence [22]. Most instructors use some form of e-learning in their courses [23]. This includes PowerPoint and Prezi, podcasts, videos, clickers (handheld devices or mobile devices to answer multiple choice questions in class, which are then counted in real time), simulations, blogs, digital textbooks, and web conferences [24].

Self-efficacy assessments are generally measured along three basic scales; magnitude, strength, and generalization. The magnitude of self-efficacy measures the level of difficulty in which an



individual feels is needed to perform a particular task [25]. This component helps individuals determine whether they have the ability to complete certain tasks. Williams and Williams (2010) note that individuals with high levels of self-efficacy approach difficult tasks as a challenge to master rather than as a threat that should be avoided [26].

Meanwhile, the role of technology and technology assistance in the classroom for students with disabilities shows that the use of technology for students with disabilities is effective both academically and socially-emotionally [27]. Gil (2007) states that, the more preparation students with disabilities have before entering post secondary education, the more likely a smooth transition will occur [28]. Meanwhile, various forms of self-efficacy related to sports have been studied by students with disabilities include self-efficacy exercises [29].

Research and development on technology & disability is potential to obtain evidence-based solutions and the implications for the welfare and development of students with disabilities. Therefore, obtaining ICT competencies and digital literacy is the first step for students, especially for students with disabilities [30]. Providing ICT access is not enough for children with learning disabilities to master ICT skills. Specially designed ICT instruction programs should be provided for children with learning disabilities [31]. ICT play an important role in empowering disabilities in the workforce. However, people with disabilities also often face financial difficulties in accessing ICT resources, thus weakening their competitiveness in the workforce [32].

Meanwhile, Shannon, Tansey, and Schoen (2009) noted how disability stigma can limit social interactions between students with disabilities and their peers who are non-disabled, potentially reducing the self-efficacy of students with disabilities, and this is a major factor in getting the rejection from tertiary institutions since it is related to graduation rates of students with disabilities [33]. Indeed there is no guarantee that interactions

between students with disabilities and non-disabilities will be positive and respectful [34]. This shows that digital media can be a channel for students with disabilities to compete with non-people with disabilities and can dismiss epistemological assumptions that students with disabilities are weaker (inferior) [35].

At present, digital media has become a preferred channel for people with disabilities to inform others concerning disabilities in the form of news, event promotion, or just gathering supporters of disability rights in the same way [36].

## II. Methods

This research is a descriptive evaluation research using the qualitative approach. Data collection is done by semi-structured interview method, Focus Group Discussion-FGD, supported by quantitative data obtained through questionnaire. In this study the technique used is purposive sampling by taking sample of informants who were participants of the 2016 and 2017 ICT Jamboree, spread across five regions in 5 provinces selected, as many as 100 people.

Prior to the field data collection, the FGDs conducted comprised of stakeholders, independent people with disabilities, ICT Jamboree judges, and experts in the field of educational psychology. After conducting a pre-test of the instruments used in the study, data collection was carried out, namely in the Palembang, the Province of South Sumatra, the city of Yogyakarta, the province of DIY, Balikpapan, the province of East Kalimantan, Manado, and the province of North Sulawesi, since July 24, 2018 to 27 July 2018 and in Jayapura, Papua Province from 30 July 2018 to 3 August 2018.

Fifteen people were chosen from the five provinces, i.e. each province consisted of three people. During interviews with informants, each team was accompanied by translators who were mostly teachers or parents of those with disabilities.

To answer the first research questions “How is the effectiveness of the implementation of ICT jamboree for people with disabilities in improving self-

efficacy? Data collection in the field was carried out using a semi-structured interview method to 100 informants who were ICT Jamboree participants, who have also filled in a questionnaire for data support.

Meanwhile, to answer the second question "What are the factors influential to the increase of self-efficacy of people with disabilities in increasing ICT competency?", aside from interviewing 100 informants participated in the ICT Jamboree, a semi-structured interview was held by involving six teachers, six parents and six representatives of the disabled in the selected provincial capital.

To strengthen the data, in-depth interviews were also conducted to several people with disabilities who had independently worked as civil servants or entrepreneurs. After completing the overall data collection, the FGD was carried out by involving stakeholders, independent people and communities with disabilities.

To obtain quantitative data from the participants of the ICT Disability Jamboree, semi-structured interviews were conducted by involving 100 people with disabilities from five selected cities. In order to facilitate a general understanding of the direction of this study, the following Table 1 is the definition and operationalization of concepts in the collection of research data:

**Tabel 1** Operationalization Concept

No	Variable	Sub Variable	Indicator
1	Effectiveness of ICT Jamboree Implementation	<p>The reaction include:</p> <ol style="list-style-type: none"> <li>1. Material</li> <li>2. ICT human resources</li> <li>3. HR Instructor</li> </ol> <p>Studies include:</p> <ol style="list-style-type: none"> <li>1. Knowledge</li> <li>2. Skill</li> <li>3. Attitude</li> </ol> <p>The results include:</p> <ol style="list-style-type: none"> <li>1. Competence</li> </ol>	<ol style="list-style-type: none"> <li>1. Participants' satisfaction</li> <li>2 Availability and suitability Device</li> <li>3a. Presentation of material</li> <li>3b Usage of Indonesian</li> <li>3c Usage of Media</li> <li>3d. Punctuality</li> <li>3e. Mastery of material</li> <li>1, Participants understand of the material</li> <li>2. Participants get</li> </ol>

		Improvement	The skills
		Self efficacy include :	3. An attitude change
		1. Confidence in the ability of oneself	1. Competency enhancement
		2. Self assurance in defining the difficulty level	1. There is a belief in one's own abilities
2	Self efficacy		2. The existence of confidence in determining the level of difficulty

Field Data analysis uses the Miles & Huberman model [37]. Data analysis in qualitative research is carried out during data collection and after the data collection is completed within a certain period. After the data which is based on the results of interviews and Focus Group Discussions are collected, data reduction is carried out, namely by selecting important data and selecting which data needs to be left out. The next stage is the presentation of data with text and matrices and supported by graphic data from the results of the questionnaire. After data triangulation, it is followed by concluding.

### III. Results, Discussions and Conclusions

#### RESULTS & DISCUSSIONS

In general the material delivered by the instructor is in accordance with the existing training modules. 90, 63% of the physically disabled informants interviewed, stated that they were in accordance with the material in the existing training modules. 90, 24% of the hearing impaired is and only 76, 92% of the visually impaired, stated that the instructor is in accordance with the existing training modules. According to them, skill training modules for the visually impaired should be written in Braille to make it easier for them.

"The important factor for people with hearing impairment is sign language, not a hearing aid. I sit in the rear row, so it is hard to see the expression and sign language"

"A blind person like me just needs instructions because I can't see. It was too noisy so it's hard to listen "

In general, the implementation of ICT Disability Jamboree from the aspect of Reaction which includes training materials, ICT resources, and HR Instructors has been running quite effectively. Even so there are a number of issues faced by ICT Disability Jamboree participants, including:

### **1. Training Materials**

The implementation of ICT Disability Jamboree did not differ the qualifications of ICT skills between people with disabilities who have high and low levels of ICT skills. As a result, people with disabilities who have high ICT skills, assessed that the material provided in the ICT Disability Jamboree is less able to improve their ICT skills. Whereas for people with disabilities who have low ICT skills, tend to not being able to follow the material delivered by the instructor since it is too difficult to understand and practice. The number of participants in one class reached 30 people, and it less effective as the class became noisy. For visually impaired, five to 7 people in class will be ideal, since they rely on hearing. Likewise with hearing impaired, they hope to sit in the front row not far from the instructor so they can read sign language, lip movements and expressions of the instructors.

### **2. ICT Resources**

The availability and suitability of ICT devices and applications used in implementing the ICT Disability Jamboree has been good but specifically for the visually impaired, they hoped of having a Braille display and braille keyboard. While for the hearing impaired, they expected hearing aids for each participant. In the meantime, the problem of the often turned off WIFI access in the implementation of the ICT Disability Jamboree becomes a quite serious problem felt by some of the participants.

### **3. HR Instructor**

Most of the informants expressed satisfaction with the HR Instructor at the implementation of the ICT Disability Jamboree. However, it is expected that the presentation of training materials needs to be carried out in detail and in depth with a longer allocation of time so the instructor doesn't give the impression as if in a hurry to pursue time in completing the presentation of the material.

Based on the results of the semi-structured interview, people with visual impairments are people with disabilities who are most convinced that skills in the ICT field can support success in school or work. The data showed 96, 15% of the visually impaired who stated their assurance, and only 3, 85% who are not assured. Meanwhile, 90.63% of those with physical disability expressed their assurance and 9.97% were not sure that ICT skills could support success in school and the workforce. While only 87, 80% of the hearings impaired are assured and 22, 20% are not.

A number of visually impaired people reveal that ICT skills can reduce their limitations. With ICT skills, they can explore their capacity further in office administration work by using MS Word and helping their parents in writing letters or using the internet to find information in cyberspace.

"Felt sure ICT can help friends at work"

Based on the data above, in general, the aspects of learning consist of three things, namely knowledge, skills, and attitudes, describe positive things. However, there are a number of things that need to be optimized including:

#### **1. Knowledge and Skills**

Most participants regard that the ICT Disability Jamboree has an added value, especially in terms of increasing knowledge and skills. This is caused by learning standards which are easily understood by people with disabilities.

#### **2. Attitude**

Most of the informants who are participants of the ICT Disability Jamboree have been able to

contribute positively to the surrounding community, teachers, friends, and to help their parents relate to ICT skills.

In the aspect of this outcome, it is expected that there will be an increase in the competence of the participants of the ICT Disability Jamboree. Based on the results of a semi-structured interview with 99 informants who were participants in the ICT disability jamboree, it was found that 89 percent of the informants admitted there was an increase in competence after participating in the ICT disability Jamboree.

"Because I can help teachers type or find information through the internet"

"I can help friends type letters"

While some other informants who claimed there had been no increase in competence after participating in the ICT Disability Jamboree, apparently this was due to already possessing the ability prior to the event.

"Because previously I already had the ICT knowledge"

Others claim they have not been able to absorb knowledge and skills during the disability ICT Jamboree so that they cannot help others yet.

"Not yet mastering their knowledge made them unable to contribute to society"

Based on the data above related to an increase in the competency of participants in the ICT Jamboree for people with disabilities, it is visible that in general there has been an increase in competency. However, there are a small number of people with disabilities who claimed not to have any escalation in their competence since they have had the competencies beforehand, while others claimed unable to understand the instructional material delivered by the instructor. This shows a similar problem with the aspects of Reaction and Learning aspects, which is caused by the lack of classification in ICT competencies of the disabled. There were participants with high ICT competencies placed in the same class as participants whose ICT competencies tend to be low or beginner. Thus there is a bias in the process of training and competition.

Those who have high competencies considered there is no increase in their competencies while those who have low ICT competencies fail to successfully follow the training process and competitions in the ICT jamboree.

### ***Confidence in Your Self Ability***

Based on the results of a semi-structured interview on disability, it showed that as many as 92.9 percent of Jamboree participants expressed confidence after attending the training, while 7.1 percent stated that they were still not confident.

"To achieve success and getting new experiences"

"Enthusiastic and having knowledge and to be more confident"

As much as 92.9 percent of informants said they wanted to dig deeper into their capability after participating in the ICT Jamboree while the other 7.1 percent did not want to explore their capability.

"In order to gain more useful knowledge"

"I want to open a business"

Based on the results of the semi-structured interview showed, 86.9 percent of the disabled is the most confident in using Microsoft Office applications (Excel, Word, and Powerpoint) after participating in the ICT Jamboree, while 13.1 percent felt unconfident.

"I am more confident in using my MS Office"

"Because it's easier and faster after the Jamboree"

After using the Microsoft Office application, while participating in an ICT Disability Jamboree, the participants claimed to be more confident in operating the internet. The data showed 84.8 percent of participants claimed to be more confident in using the internet while another 15.2 percent claimed to be not confident.

"Yes, I have also created a blog and youtube"

"It's easier to find information via the internet"



### ***Confidence in Determining Difficulties***

Based on the results of a semi-structured interview of 100 informants who were participants of the ICT disability jamboree, indicates the participant's confidence in determining the difficulty was prominent in operating MS Word. The data shows 87.9 percent of informants claimed to be able to operate MS Word easier and faster after attending the ICT Disability Jamboree while 12.1 percent were hesitant.

"Yes, I can operate Ms Word more quickly and easily after participating in the ICT Jamboree."

"Shortcuts are taught so we can use it effortlessly"

The confidence of the participants in determining other prominent difficulties is in finding new friends through social media. The data shows that 86.9% of informants claimed to be more confident in finding new friends through social media after participating in the ICT Jamboree while 13.1% were not confident.

"Through social media I am more confident to find new friends"

Previously it was difficult to find information on job opportunities, but after participating in an ICT Disability Jamboree it was easier for them to get information using the internet. Data showed that 78.8 percent of informants claimed that they could obtain information on job opportunities easily and quickly after participating in the ICT Jamboree and 21.2 percent stated that they did not.

"Yes, we got information on vacancies for the disabled in Yogya"

Meanwhile, the data showed that 52.5 percent of informants who were participants of the ICT Disability Jamboree said they were confident in making a good magazine cover design, while 47.5 percent were hesitant.

"I can make an attractive magazine cover design for school work"

In general, there was an increase the confidence of the participants of the ICT Disability Jamboree in overcoming difficulties related to training materials and competitions on the implementation of the ICT Jamboree. The highest confidence felt by the informants is operating the MS Word application, i.e they believe they can use it easier and faster. Second, is the assurance in socializing and looking for new friends through social media. And third, is confidence in obtaining information on job opportunities through the internet.

### ***The Role of Communities, Teachers and Parents of Disabilities***

The existence of a disability community has a strong influence in increasing ICT competency and self-efficacy of the disabled. The community has an important role in empowering people with disabilities as done by the Association of the visually impaired Indonesia-Pertuni in South Sumatra. It is one of the communities in Palembang concerned in empowering its members so as to be able to live independently. According to the Secretary of Pertuni South Sumatra, Andre Agasi, the disability community is a place to share skills, especially in the field of ICT.

"The spirit, the willingness to move forward by sharing ICT skills and attempting to use new applications."

Meanwhile, the teacher's role is also important in increasing ICT competency and self-efficacy of the disabled. According to Desi, Balikpapan SLBN teacher, the role of a teacher is to provide the best ICT education and skills to their students.

"It is hoped that with good ICT competence, students with disabilities can have the confidence to work."

According to Ms.Desi, SLBN Balikpapan has cooperate with parties outside the school, for example the industrial community, such as hotels and restaurants in carrying out extracurricular

activities. Thus students with disabilities have the experience to practice in the workforce.

During the learning process, a teacher has an important role in motivating those with disabilities to understand the subject and able to adapt to the environment. When students with disabilities do not understand the class lessons, the teacher must spend personal time with the disabled students.

"... The teacher must take the time to assist outside learning hours ..."

The role of parents is to provide motivation and provide ICT facilities for their children. According to Fenny Tamod, parents of one of the ICT Jamboree participants from the city of Manado, the important role of parents in improving ICT competencies of those with disabilities and optimizing their potency by providing motivation.

"We as parents always provide motivations so our children will have the urge to make progress and be confident so they can be equal to non-disabled children."

A similar sentiment was revealed by Robert Nyong, one of the parents of the hearing impaired from Papua Province who participated in the ICT Disability Jamboree.

"In addition to arousing children's confidence, they also provide expertise in accordance with the children's abilities, and also provide motivation to be able to socialize with non- disabled"

Moreover, Robert Nyong admitted that he is often involved his children in activities which were in accordance with their abilities in order to develop the capabilities and skills of their children. With positive motivation, children with disabilities can increase self-confidence so they finally can be self assured and independent in the community.

***Keys Success for People with Disabilities: FGD expert judgment***

The independency of people with disabilities is closely related to internal and external factors of people with disabilities. This was stated by General Manager of Thisable Enterprise, Nicky Claraentia Pratiwi, who is also a person with disability. The Internal factors are, families should provide encouragement and give tenacity to people with disabilities so they can be independent in the workforce. While the external factors include giving role models of people with disabilities who are independent and successful to motivate them.

"The role model is very important. New confidence exists, for example, knowing there are children with disabilities who has savings, or are able to buy motorbikes. Success stories may be able to make other disabled children move out of their comfort zone."

Meanwhile, according to Dimas, a civil servant of the Ministry of Education and Culture of the Republic of Indonesia, who is visually impaired, the key word in developing self-confidence is to be able to know their inner strength so as to generate self-confidence.

"Focusing on strengths, of what can we do in the workforce ... One of the things which raises my confidence is knowing that computers talk. With the presence of ICT, computers is a source to increase self-confidence. "

As for the hearing disabled, according to Juniati, Chairperson of Jakarta Sign Language Interpreters, confidence can be built through sign language. By mastering sign language, a more complete information will be easier to be received by the hearing impaired group.

"For the hearing disabled children, self-confidence can be improved beyond sign language itself. Why? In school, children tend to be passive. Sign language is difficult to practice in school. "

The Chairperson of the Difabel Action community, Teguh Prasetyo said, based on his personal experience as a disabled person, people with disability tend to have low self-confidence, since they are physically different from non-disabled. The role of parents is important in building the confidence of those with disabilities. In addition, the existence of a mentor to guide a person with physical disability to be independent is of importance.

"We need to have a mentor so we can feel safe. Well, we implement it to friends with physical disability. They should constantly be accompanied, continued to be monitored so they will not feel alone... "

While the representative of the Jakarta Disabled Children Foundation-YPAC Foundation, Heru Haerudin said, independency is how people with disabilities can be independent in their daily activities. There are quite a lot of person with cerebral palsy or having movement and muscle disorders at YPAC Jakarta. To make them independent, having only one teacher is inadequate.

"In YPAC there's quite a number of those with cerebral palsy ... Defining a child with a disability cannot be done by a teacher, but should be by several experts, namely doctors, therapists, psychologists, teachers, and other specialists."

While Irdanelly, Chairperson of the Jakarta-Gerkatin Deaf Movement in Jakarta, revealed, the hearing impaired can have confidence and be independent in the workforce, if they have skills and mastered their field. Facilities supporting the independence of people with hearing impairment include symbols and or writing, sign language, sign language translators, digital info (running text), and hearing aids.

Based on the results of the FGD above, it was revealed that the key to disability success is to believe in one's own abilities. This can be realized with the full support of parents, teachers and the community. These three things are interrelated. Parents instill the values of self-confidence from an

early age, then strengthened by the skills provided by the teacher and the disability community as role models. The existence of ICT is a breakthrough tool for people with disabilities to open new horizons and increase their confidence in socializing with non-disabled people.

#### **IV. Conclusion**

Based on the results of triangulation of data show that in general the implementation of ICT Jamboree disabilitas from the aspects of Reaction which includes training materials, ICT resources, and HR Instructors have been running quite effectively. However, the implementation of ICT Disability Jamboree did not set apart the qualifications of ICT skills between those with high ICT skills and the low ones. This problem results in an onset of a gap between people with disabilities. Thus, competency classification should implement in participants at the beginner level, advanced level, and participants who entered the expert level. In addition, there is a need to separate learning classes based on the classification of blind disabilities, disability disabilities, and hearing disabilities in the implementation of ICT Jamboree.

The key success of people with disability in increasing ICT competence and self-efficacy is the role of the community, teachers, and parents. The synergy of these three factors can accelerate the improvement of ICT competence and disability self-efficacy. The most important thing is the government, in this case the Ministry of Communication and Information to conduct ICT skills training for people with disabilities connected directly to work placement and the needs of the workforce. Thus furthermore, the disability workforce can be empowered for the benefit of the nation and the country, especially for the everyday life of people with disabilities.

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