Aproaches to Training People with Disability in Mainstream Vocational Training Centers

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Abstract—In Indonesia, Vocational Training Center consists of government institutions under the Ministry of Manpower (MoM) and private training institutions as the training providers. However, only a few Vocational Training Centers have tried pilot projects involving people with disabilities in inclusive vocational training. This study investigates approaches and methods employed by instructors in conducting inclusive vocational training. We present findings from a qualitative study based on virtual focus group discussions involving eight instructors with different skill and competency backgrounds from the garment apparel, hospitality, information technology, and management business vocational departments at Vocational Training Centers under the Ministry of Manpower (MoM). The data was transcribed manually and coded using NVIVO software. The result showed that due to requirements for persons with disabilities entering vocational training, the training participants were still dominated by persons with physical and sensory disabilities. Thus, instructors tend to apply approaches and methods depending on participants with disabilities they handle. Instructors attempted using adaptive training aids and materials such as using training machines or software that are accessible to individuals with different disabilities. Physical environment and special need teacher are necessary to support inclusive training performance.

Keywords—Vocational Training Center, inclusive vocational training, instructors

I. INTRODUCTION

In Indonesia, Vocational Training Center (VTC) consists of government institutions and private training institutions as the vocational training providers with the total number of 17,113. There are 827 VTCs (4.83%) under government institutions supervision. The data from Indonesia Ministry of Manpower (MoM) stated that 130 VTCs (15.72%) are managed by Indonesia central government institutions and the 697 VTCs (84.28%) are under local government. Meanwhile, vocational training centers assisted by Indonesia MoM have wide variations in terms of the size, capacity and authority. There are 21 VTCs categorized as ministry-managed VTCs that are located throughout Indonesia. In addition, 284 VTCs are categorized a province-managed VTCs and district-managed VTCs [1].

The VTCs as one of component to implementing national vocational training in Indonesia are mandated by National Vocational Training Regulation (No.31/2006) to conduct competency-based training in form of short training, provide assessment and certification for the individuals who graduated from primary or secondary school and want to equip themselves with both of soft and hard skill to work either in industry or to be entrepreneurs [2]. This regulation also emphasis to conduct a fair and non-discrimination in its implementation. Moreover, Indonesia government has also ratified legislation on Disabilities No.8/2016, which encourage stakeholders’ responsibilities towards the rights of persons with disability in Indonesia for instance equality in opportunity and access to education, training and employment [3,4]. Due to the demand in the labor market for trained persons with disability, recently VTCs also promote vocational training of disabled people alongside their non-disabled peer that was initiated and supported along with local NGO in Indonesia.

In the other hand, only a few VTCs have tried pilot projects involving people with disabilities in inclusive vocational training due to lack of commitment from central and local government on inclusive training leading the disabled people cannot fully participate in vocational training particularly. Many of reports stated the recommendation to ensure implementation of better inclusion of students or trainees with disabilities in TVET program including the necessity for policy and commitment for all parties, adaptive curriculum and learning materials, skilful staff, vocational assistance and counselling, accessibility of the infrastructure [5–13]. However, only few of previous studies and reports involved instructors to share their factual experiences and perspectives concerning inclusive vocational training particularly [9,14,15]. A study on approaches of vocational instructors in Indonesia to training disabled people seems given different perspectives and knowledge in TVET research area.
II. LITERATURE REVIEW

A. Opportunities and Challenges of Inclusion of Disabled People in TVET Programs

Global data projected that about 15% of the world’s population or about one billion people are people with disabilities. It was estimated 785 million people with disabilities at productive age who are included in working-age. The average labor force participation rate for persons with disabilities of productive age in the world is 36%, far below the average percentage of participation rates for non-persons with disabilities of productive age, which is 60% [16]. In addition, the policy brief published by the International Labor Organization (ILO) regarding opportunities for apprenticeships and learning in the workplace for disabled people stated that persons with disabilities are might be marginalized in the labor market due to their low educational background and their impairment. Moreover, workers with disabilities tend to earn less than non-disabled workers and get negative treatment from employers or co-workers who doubt their ability to work [16,17]. However, people with disabilities need to work for the same reasons as those without disabilities.

The potential and abilities of persons with disabilities are often judged from medical criteria and their physical impairment or mental disability rather than from skills and competencies they have [18]. Since inequality and discrimination at labor market are faced by persons with disability, practically they need to have better access to vocational education and training that can accommodate them with skill development and employment opportunities [16]. Moreover, study also shows that vocational education and training (VET) can be easily accessed by persons with disabilities compared to the opportunities and attainments of persons with disabilities to receive education at university level [11].

Workplace learning, particularly through inclusive apprenticeships, is an effective way to transfer technical skills and prepare persons with disabilities of working age for the labor market [17]. Another study shows that VET programs for people with disabilities contribute to significant changes in the lives of people with disabilities for instance improving work-related skills, supporting their full participation in work and making good interaction with colleagues and also involving in the productivity of the organization [19,20]. Persons with disabilities who get opportunities entering in vocational training programs gain experience to overcome the difficulties they have faced in gaining self-worth, forming social bonds with the community and achieving independence in their personal lives and career development [10,21]. In many countries, vocational training programs were designed for providing individuals at any level of age including students dropping out from schools, high schools student’s graduates who need technical or vocational skill improvements, retired employees who want to get training refreshment, and also woman who want to back at labor markets. Moreover, recently disadvantaged people both in social and economic class level including people with disability also get the access and take benefit at vocational education and training [9,12].

Beside the issues of equal opportunity and access of persons with disability to education and training, there were challenges and barrier in making vocational training work in practice. There are several significant barriers encountered by persons with disabilities in vocational education and training (VET) institutions, including the lack of adaptive materials, unsupported facilities, lack of skillful trainers, perceptions of the disability of persons with disabilities [9,15]. Studies on people with mental disabilities who take part in vocational training also found culture barrier including negative attitudes and perceptions towards people with mental disabilities and structural barriers related to rigid curricula and untrained teachers [22]. The difficulties faced by persons with disabilities in the process of learning and vocational training was also related to the absence of guidance and assistance for persons with disabilities in choosing vocational training or skill development training that is appropriate to their special needs regarding their disability [9,12,14].

In addition, teachers or vocational instructors who train persons with disabilities and non-disabled persons in the same classroom situation also faced difficulties [23]. Trainers found barrier and difficulty to train both technical and soft skill of students with disabilities due to less adaptive curriculum and learning tools and various impairment of people with disabilities who needs special treatments [15,23]. In this case, teachers or vocational instructors are required to equip themselves with special skills and competencies such as in learning methods, evaluation, communication skills in the classroom to support effective inclusive learning setting [23,24]. Basically, the success of inclusive learning is not only emphasized on the achievement of students but it is also determined by the ability of the trainer to support the ideal and adaptive learning process of theory and practice for persons with disabilities [14].

B. Inclusive TVET Practice Strategies

Based on the previous research concerning best practices and recommendation for making inclusion work in practice at all sector of education field and background, mentioned that there were several efforts to be emphasized. First, reviewing curriculum for inclusive education and training. Some studies stated that inclusion for people with disabilities in education and training need curriculum rethinking, curriculum content reorganizing, and instructional modification for teaching and learning process at education and training institutions [25,26]. In addition, children with SEN can receive modified curriculum which should in line with the existing curriculum standard [7].

Second, Adapting learnings and tools. Education or training institutions along with the teacher or trainer to enhance adaptive learning tools. The education or training management may allocate financial resources for purchasing adaptive learning equipment, machine, software technology that can be assessed by students or trainees with disabilities. Third, Skillful
Teacher and Staff. All of management, teacher or instructor, and staffs were encouraged to be trained to deal with the special educational needs of students with disabilities. Students with disabilities demanded skillful teacher, trainer and also staff to get assistance and counseling to help the to choose education or training program that fit with their special needs and suitable careers for their future [7,9,23].

Fourth, Accessibility. Participation of disabled people in education and training also need accessible physical environment especially for persons with physical and visual impairment. The friendly infrastructure and building at education and training institutions particularly including accessible sidewalk, a large space of classroom/workshop, and also accessible toilets for persons with visual impairment and wheelchair users especially. Moreover, students with hearing impairment also need sign language interpreter to support them in academic performance and communicate with their teacher or trainer during learning activities. Fifth, Disability oriented etiquette and behavior. This term is related to non-discriminatory attitudes to people with disabilities both at institutions and community level [9,16,26].

III. RESEARCH METHODS

This study applied phenomenological qualitative method since the aim of this study to scrutinize approaches applied by instructors in conducting inclusive vocational training programs. As it is known that the qualitative approach helped to explore and get deeper understanding of individual or group’s point of view or experiences regarding special cases or phenomenon [27]. Thus, this research involved vocational instructors as research subject and investigated on How do vocational instructors define approaches to training participants with disabilities?

A. Procedure and Participants

Approval for this research was obtained from Vocational Training Center (VTC) under the Indonesian Ministry of Manpower (MoM) located in Surakarta, Sidoarjo, and Banyuwangi. These three VTC were selected based on their pilot project involving people with disabilities in inclusive vocational training.

This study involved vocational instructors as research informants who were selected using purposive sampling [28]. The criteria for participation included experience in working at government VTCs for more than two years and teaching one or more disabled people in their vocational training program. A total of eight vocational instructors (n=8) selected “from these VTCs participated in this research. They comprised four groups of vocational instructors with different competency and vocational background: Business Management (n =2; 1 male and 1 female), Information Technology and Communication (n =2; 1 male and 1 female), Garment Apparel (n=2; 2 female), and Hospitality &Tourism (n=2; 1 male and 1 female). Most of them were between 25 and 37 years of age. Two informants possessed Master degree, 5 informants at Bachelor degree, and 1 informant at diploma degree.

B. Data Collection Techniques

Data collection occurred through Virtual Focus Group Discussion since this research was conducted during Covid-19 Pandemic Era in Indonesia particularly that forced social distancing and discouraged indoor meetings. The recruitment of virtual focus group was similar to in-person focus group that started by making a list of potential participants [29]. In addition, based on literature review regarding the implementation of virtual focus groups for qualitative data collection in a global pandemic, the researcher decided to follow the design of virtual focus group discussion by involving 4 participants per group discussion to get deep understanding concerning the research focus. The group was divided into two groups [30]. The first group involved two business management vocational instructors from VTCs of Surakarta and two hospitality tourism vocational instructors from VTCs of Banyuwangi. The second group consisted two Information Technology and Communication vocational instructors and two garment apparel vocational instructors, all of them were from VTCs of Sidoarjo.

The arrangement of Virtual Focus Group Discussion included several steps: (1) Preparation. Researcher used Zoom Clouds Meetings (video conference platform) as its widespread use since the beginning of the pandemic and prepared informed consent forms, questions guidance scripts and FGD protocols, (2) Recruitment Process, Researcher identified eligible and willing participants and make a call to potential participants include screening question about technology and internet access, (3) Seeking Consent, Researcher sent informed consent form to the selected participants by email and link of virtual briefing invitation, (4) Briefing, in this pre-focus discussion virtual meeting, researcher gave instruction to the participants on how to conduct virtual FGD based on the protocols which includes explanations about research purposes, the schedule and duration of virtual group discussion, interview questions script and also Zoom etiquette, (5) Reminder Call/Text, researcher reminded participant of time and date of meeting by sending Zoom meeting invitation link through email and WhatsApp messenger, (6) Implementation, In the day of virtual focus group discussion, The researcher had the role as the moderator to facilitate and drive the discussion. The moderator was also helped by co-moderator/host as technical support managing waiting room, changing participants name, recording attendance with “screenshot”, handling video audio recording. The meeting lasted about 120 minutes. In addition, each group of FGD had different virtual meeting schedule as was agreed before, (7) Follow up, researcher contacted the participants to confirm a reward [29-33].

C. Data Analysis

To analyze the information gathered from virtual focus group discussion, the researcher applied sequential phases to get an accuracy and validation of the qualitative data. First,
video and audio record from Zoom recording were transcribed as verbatim transcript. Second, verbatim transcript was read carefully and imported into NVIVO ver.12 software. Third, data was coded inductively by creating several nodes to determine the related topics from the informant’s point of view. Fourth, the codes were reviewed to eliminate redundancy and categorized into themes representing a common idea. Fifth, specific illustrations, multiple perspectives from individuals and quotations were represented to convey the findings of coding process. Interpreting and representing data in narrative text were the last qualitative analysis step in this study.

The credibility and accuracy of the findings in this study were conducted by employing two validity procedures namely member checking and peer debriefing. These multiple procedures were recommended by Creswell to improve researcher’s ability to assess the accuracy of the findings and to minimize bias of the result of the study [27]. The procedure of member checking in this study was implemented by the researcher by inviting each participant to review the interpretative data of research’s findings and shared their feedback in order to avoid bias perspectives made by the researcher. In addition, peer debriefing as the approach to improve research credibility was conducted by asking the peer debriefer who have knowledge and experiences about TVET research area. In this study, peer debriefer was researcher’s supervisor who helped to review coding process and evaluate data and analytical techniques in order to detect biases.

IV. RESULTS

The inclusive vocational training was initiated by the three VTCs (Surakarta, Sidoarjo, Banyuwangi) in collaboration with NGO named SAUJANA which concerns with career development for disabled people in 2019. The partnership between the two parties was began with initiating training for vocational instructor to address the special training needs for disabled people. In addition, the NGO (SAUJANA) recruited the disabled people to follow vocational training provided by the vocational training centers, for instance VTCs of Surakarta provided costumer services officer vocational training under business management vocational department, VTCs of Sidoarjo provided computer operator assistant vocational training under information technology and communication vocational department, sewing garment making, sewing clothes based on style, and sample garment making vocational training under garment apparel vocational department, VTCs of Banyuwangi also provided housekeeping vocational training and Front Office training under hospitality and tourism vocational department.

Furthermore, from the data analysis proses using NVIVO ver.12 found three themes that shows the finding of the study namely types of disability of vocational training participants, learning, Adaptive learning aids and tools, and accessibility. The interpretation of the approaches to training involving these three points described as follow.

A. Type of Disability of the Vocational Training Participants

It has been concluded from the focus group discussion among the instructors that participants with disabilities enrolled in three MoM-Managed vocational training centers have physical impairment and sensory disabilities. The instructors rarely allowed participants with mental disabilities to enter the vocational training due to the different requirements of the vocational programs. The information technology and communication instructor described the requirement for selecting the training participants and the eligible persons with disability who are allowed to follow the inclusive training program:

“…at the moment, we have three participants with physical disability (upper limb and lower limb disability) joining the computer operator assistant. They were recruited by SAUJANA (NGO)”

Another information technology and communication instructor described the requirements for selecting the training participants:

“… we have no experience to training participants with mental disabilities. It is because COA training programs need logical thinking to learn Microsoft excel. However, we selected the participants with physical impairment for instance physical paralizes, little finger. Based on our experience, they can adapt with training situation.”

A garment apparel instructor illustrated

“…we have experience to training participants with physical impairment and hiring impairment. But we can not involve participant with visual impairment in garment apparel vocational training because we use industrial or portable sewing machine in learning process and make pattern for garment. These tasks seem difficult to be done by participants with visual impairment.”

A hospitality and tourism instructor mentioned

“…Actually, inclusive training participants in VTC of Banyuwangi were provided and selected by SAUJANA, an NGO. The NGO mostly provided the participants with physical impairment to follow room attendant vocational training. I feel that they faced difficulties in training process such as in handling the cleaning equipment and dealing with wet floor.”

A business management instructor stated

“…we initiated inclusive vocational training program collaborated with SAUJANA (NGO) along with USAID. For the first inclusive training in softskill programs, we accepted participants with sensory and physical impairment. Then, in 2018, business management department held inclusive program in costumer services training. The training participants were persons with visual impairment and persons with mobility impairment.”

To sum up, the type of disabilities of the training participant in three VTCs was dominated by mobility and physical impairment such as upper limb disability, lowe limb...
disability, disability in coordination with different organs of body. The disability of the participants can be either an in-born or acquired due to disease or work accident. However, there were a few participants with sensory disabilities including vision disability and hearing disability enrolled in these three VTCs.

B. Adaptive Learning Tools and Materials

Instructors believed that that their knowledge and experiences influence their approach to handle participants with disability in inclusive vocational training. Before the three VTCs initiated the inclusive training programs, all of component in VTCs management including instructors and administration staff followed training in disability awareness and inclusive education held by SAUJANA (NGO). Only one of informant out of the total of 8 informant in this study mentioned that she never joins the training. In addition, the training itself gives direct benefit to the instructors to determined the suitable approaches in delivering learning and training process among to meet the different special need of the disabled participants. Instructors agreed that they need adaptive learning aids and tools.

Garment apparel instructors stated

“...I have met participants with hearing impairment who joins garment apparel vocational programs. First time the participants doing the assignment using industrial sewing machine with noise sound, the participant got suffered. Then, I decided to use portable sewing machine for the training participants with hearing impairment.”

Another Garment apparel instructor who never join the special need training for disabled persons mentioned

“...I only have experience in training the participants with physical impairment. They can follow my instruction during the training process. However, I gave different task to do for them regarding their physical disability. For instance, the non disabled participants have to sew clothes with pocket. Then the disabled participant was asked to sew clothes without pocket.”

Business management instructors mentioned

“...I have used software screen reader for teaching Microsoft word in Customer Service programs for participants with visual impairment. It seemed work to disabled participant with visual impairment but the sound produced of the screen reader software disturbed the other non disabled participants.”

In the other hand, instructors of hospitality and tourism vocational programs and instructors of information technology and communication have different strategy in delivering training for participants with physical impairment. They have used adaptive materials to meet participants’s need.

Instructors of hospitality and tourism described

“...We can not used adaptive learning equipmet in room attendant vocational training. The learning equipment used in the training process suitable with hospitality industry standard.

But I tried to give disabled participant flexible time in conducting assignment during practical task in workshop. For example, when cleaning the floor, the participants with physical impairment use standard cleaning equipment. I observed they face difficulties because the tools are so heavy for them. But I give tolerance to them to clean the floor with flexible time.

Another Information Technology and Communication instructors stated

“...In our department, we used ergonomic desk for both disabled participant and non disabled participant to create comfortable classroom setting for the training participants. However, talking about the adaptive software or tools for disabled participants, we only use the standard software because the participants with physical impairment still can access the software like Microsoft excel. But we also give flexible time to disabled participant to finish the practical task due to their cognitive or mobility impairment.”

C. Accessibility

All of instructors argued that physical environment and care giver for special need participant gave support to make inclusive training work in practice. The informant mentioned VTCs must be supported with accessible infrastructure and building for participant with disability including large classroom or workshop, toilet rooms, walkway for wheelchair user. However, several instructors mentioned their institution have not provided accessible infrastructure yet for disabled training participants.

Business Management instructors mentioned

“...VTCs of Surakarta have provided accessible infrastructure such as large classroom or workshop, toilet rooms, walkway for wheelchair user, wheelchair ergonomic desk in first floor of the building for supporting disabled participants’ need.”

Information Technology and Communication instructors stated

“...VTCs of Sidoarjo have provided accessible toilet rooms but the location is far from our workshop. Management should make in progress to provide accessible toilet rooms near to our workshop and build walkside that accessible for wheelchair user.”

Another hospitality and tourism instructors mentioned

“...We only have accessible toilet room. VTCs of Banyuwangi is still working in providing the accessible infrastructure because our VTCs was new established that need more improvement.”

In addition, VTCs Sidoarjo have collaborated with SAUJANA providing care giver or sign language teacher to assist the instructors to communicate with participants with hearing impairment at learning or training practice.
Garment apparel instructors stated

“… I was helped by sign language teacher to communicate with hard of hearing training participants when I deliver the materials or explains the assignment. However, the teacher was not available everyday. When the sign language teacher has not came, I try to communicate with the participant with hearing impairment using text or provide job sheet containing instruction to do the assignment.”

V. DISCUSSION AND CONCLUSION

The approaches to training persons with disability in inclusive vocational training programs conducted by Indonesia MoM-managed VTCs from the perspective of vocational instructors involved the information about the types of disabilities of training participants that can be a major factor to determin the approaches and strategy in training the participants with disabilities who have various special needs to meet. Moreover, accessible of physical environment and assistance from sign language teacher becomes one of main part to support ideal inclusive vocational training programs at VTCs particularly.

These findings were in line with the previous research that described recommendation to implement good inclusive vocational education training practice. The skillfull trainers must observed the various type of disabilities of training participants to support the ideal and adaptive learning process to meet participants’s special need [9,14]. In addition, accessible infrastructure provide support to disabled participant to meet their needs. Moreover, assistance from care giver or sign language teacher also help the disabled participant in academic performance and to communicate with their instructors during learning activities [3,9,26].

REFERENCES


